

Comparing Coastal Responses to Promote Regional Resiliency

Tina Shumate, MS Department Marine Resources
Kimberly Miller, Eco-Systems, Inc.

For More Information:
www.dmr.ms.gov

Tina Shumate, MS Department Marine Resources

Tina.shumate@dmr.ms.gov

Kimberly Miller, Eco-Systems, Inc.

Kimberly.miller@eco-systemsinc.com



Mississippi Department of Marine Resources

Office of Coastal Management
and Planning

Tina Shumate
Office Director

**MISSISSIPPI GULF COAST
SMART GROWTH**



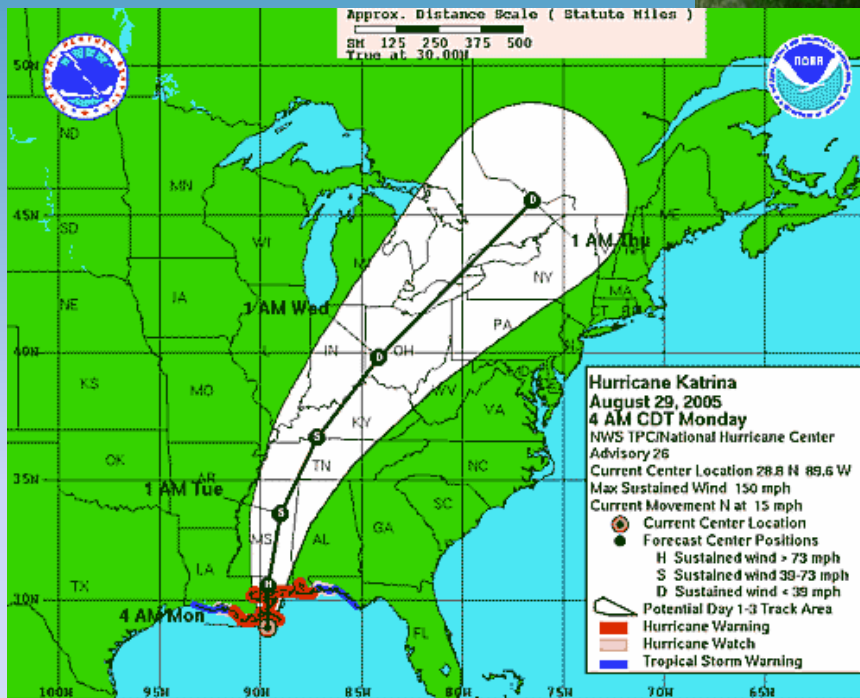
Smart Growth Initiative

- Began as a result of the boom of casino development on beachfront
- Formed Coastal Resource Management Plan, held stakeholder meetings
- Host annual Coastal Development Strategies Conference since 1999
- Wrath of Hurricane Katrina, Aug. 2005—loss of view-shed and natural assets

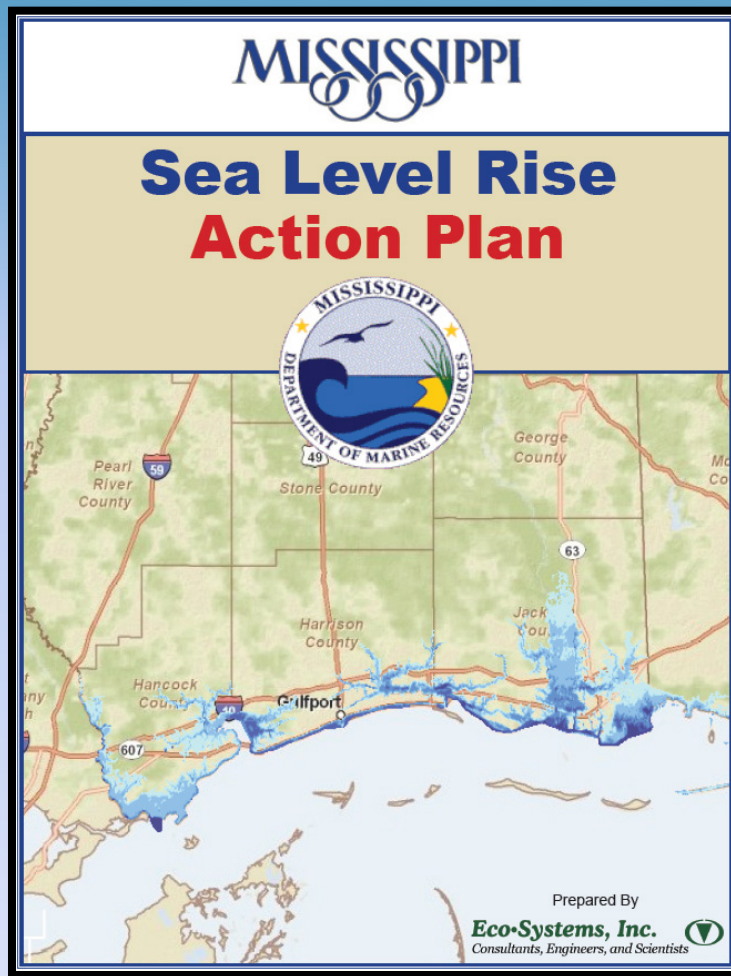
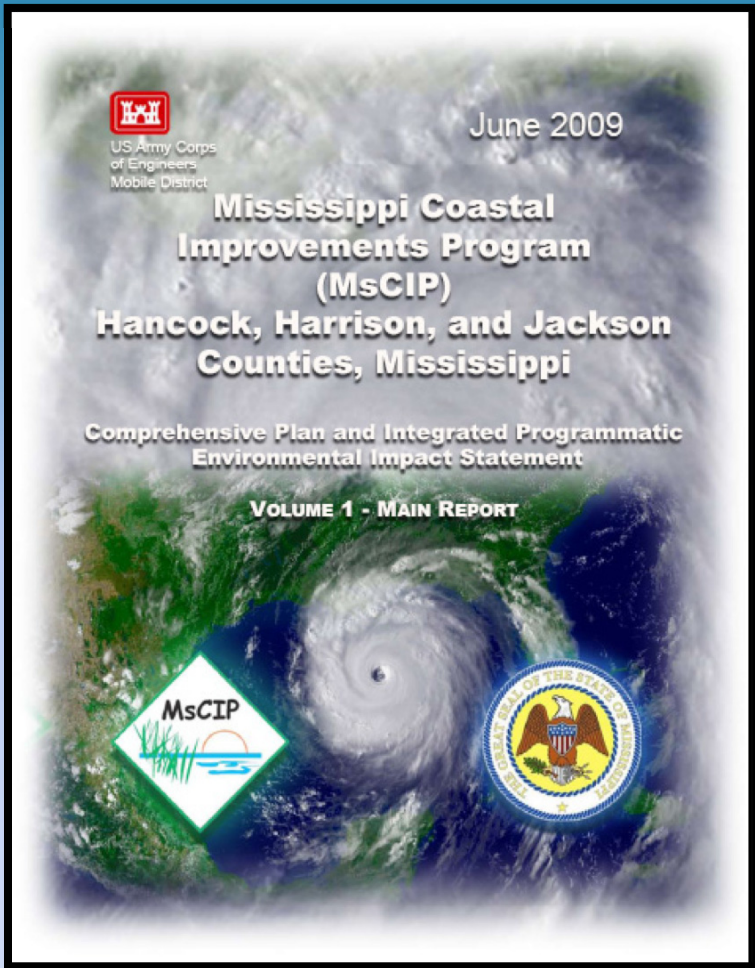
Mississippi Gulf Coast



Hurricane Katrina

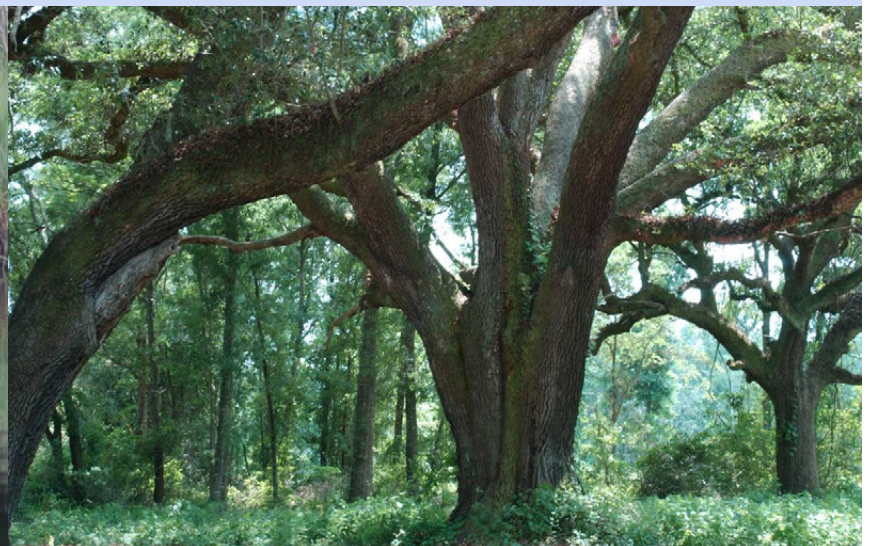


Building Resiliency

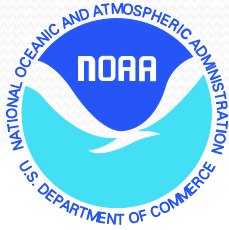


What do we want to look like?

- Need to maintain the unique heritage of the Mississippi Gulf Coast (Sense of place). Six coast counties designated National Heritage Area.
- Development of Smart Growth Toolbox



Partners



Harrison, Jackson, Hancock, Pearl River, Stone and George counties

Cities of Pascagoula, Gautier, Moss Point, Lucedale, Biloxi, Gulfport, D'Iberville, Long Beach, Pass Christian, Bay St. Louis, Waveland, Wiggins, Picayune, Poplarville



Smart Growth & Sustainability for the Mississippi Gulf Coast

MS Department Marine Resources
Eco-Systems, Inc.

Tina Shumate, Kimberly Miller
February 2, 2012

Mississippi Gulf Coast Communities

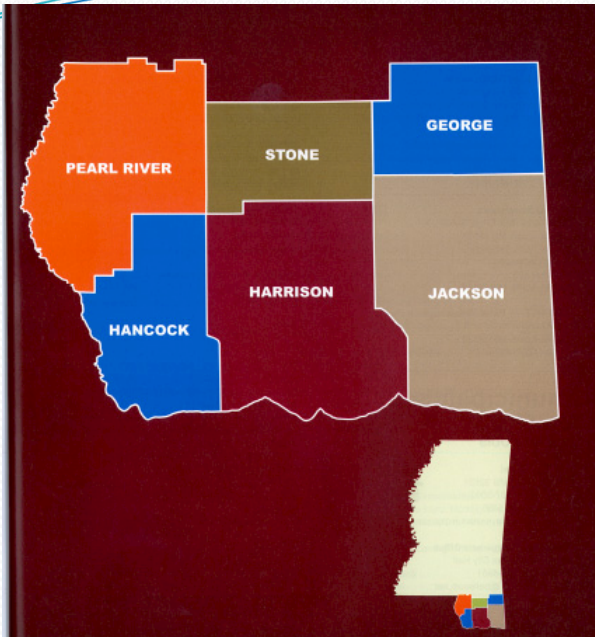
Achieving
Sustainability
through a Respect
for the Gulf Coast's
Natural and Cultural
Heritage





Geographic Context

- 6 Coastal Counties
- 11 Coastal Municipalities
- Mississippi Sound, Wolf & Pascagoula Rivers, Bay of St. Louis, Biloxi Bay







MS Department of Marine Resources: Office of Coastal Management & Planning

- Building the capacity of state and local governments to manage and protect coastal wetlands and marine resources
- Providing planning assistance to assist the 11 coastal cities and six coastal counties
- Preserving over 300 Years of Gulf Coast Cultural and Environmental Heritage
- Mentoring Mississippi's Coastal Communities in Smart Growth Concepts, Stormwater Management, Resilient Practices, and Sustainable Development Methods
- Promoting Clean Marinas
- Managing Coastal Impact Assistance Program (CIAP)

Toolbox for Smart Growth, Sustainable Development and Coastal Resilience

- Five Concepts based on 10 Smart Growth Principles:
 - Community character
 - Growing green
 - Transportation choices
 - Policy in practice
 - Coastal resilience
- Fifteen Resource Guides on five Concepts
- Tools and References





'Concepts' Defined

- Comprehensive framework for sustainable growth in MS Gulf Coast communities.
- Context for the practices outlined in resource guides.
- Reform your Approach = Reach Smart Growth Goals
 - Enhanced Community Character
 - More Transportation Choices
 - Promote Green, Environmentally Sustainable Growth
 - Policies Promote Sustainable Development over Sprawl
 - Improved Community Resilience to Natural Disasters



Resource Guides

- Resource guides explain how to implement the 5 Smart Growth Concepts
- Each Concept has at least Three Resource Guides:
 - Three Smart Growth strategies, w/following content
 - Definitions
 - Illustrations
 - Tools & References

Toolbox Homepage

- Illustration links to Concepts, Resource Guides as PDF documents
- Download
- Save
- Print



SMART GROWTH
for the Mississippi Gulf Coast

Smart growth is an urban development plan that concentrates growth in compact walkable urban centers to avoid sprawl and advocates compact, transit-oriented, walkable, bicycle-friendly land use, including neighborhood schools, complete streets, and mixed-use development with a range of housing choices.

Smart growth's goals are to achieve a unique sense of community and place; expand the range of transportation, employment, and housing choices; equitably distribute the costs and benefits of development; preserve and enhance natural and cultural resources; and promote public health.

Mouse over items in the illustration below or click on topics to learn more



Bicycle & Pedestrian Paths

Biking and walking instead of driving can reduce emissions, save money on fuel and maintenance, and foster a healthier population. Pedestrian- and bicycle-friendly improvements include bike lanes on main streets, an urban bike-trail system, bike parking, pedestrian crossings, and associated master plans.

[LEARN MORE](#)

Community Character Fix It First Mixed-Use Districts Housing & Neighborhoods	Transportation Choices Complete Streets Alternative Parking Public Transit Bicycle & Pedestrian Paths	Resiliency & Natural Hazards Protecting People & Property Evaluating Your Assets Structural Solutions	Policy in Practice Development Review Public Participation Public Education Quality Control	Growing Green Green Streets Conserve & Preserve Stormwater management Waterfront Development
--	--	---	--	---



The fact sheets provided here are in Adobe® PDF form. If you do not have this free reader, you may download it from Adobe®. If you experience problems downloading a file, please update your Adobe Reader from the link provided.

© Mississippi Department of Marine Resources.
MISSISSIPPI DEPARTMENT OF MARINE RESOURCES DISCLAIMER

Interactive Website – Smart Growth Scene

Elements in scene represent concepts in the categories of Smart Growth

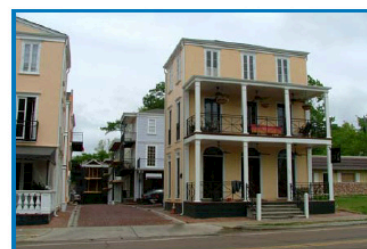




Resource Guide Topic → **Community Character: Housing & Neighborhoods**

Safe and walkable street networks connect homes and neighborhood to each other and to surrounding areas. A mixture of uses throughout a community provides for better security through 24-hour activity and more 'eyes on the street'. Architectural elements like front porches and compact building design reduce areas for undesirable building design.

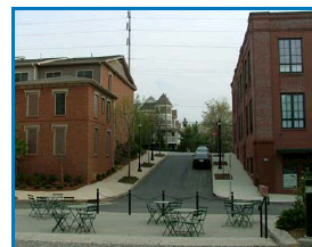
Live Link to Tool → The [Walkability Checklist](#) encourages its users to take a walk with a child and then answer a series of questions about traffic safety in their neighborhood.



Above: Sidewalks and front porches encourage more "eyes on the streets", providing for safer neighborhoods.



Above: An illustration from the Mississippi Urban Renewal Pattern Book shows a walkable neighborhood with houses set close to the street.



Right: Common open space and narrow streets help produce a sense of security among residence of Glenwood Park in Atlanta.

Tools & Resources →

ACTIONS	POLICIES • TOOLS • TECHNIQUES
Create a range of housing opportunities and choices	Allow zoning flexibility to build housing units of varied sizes and prices Adopt Inclusionary Zoning to incentivize or require affordable units Create Community Land Trusts that lower the cost of housing
Foster distinctive, attractive communities with a strong sense of place	Identify unique architectural characteristics of Mississippi neighborhoods Determine the characteristics that make a place special and how to enhance them Preserve the community's history
Create walkable neighborhoods	Incorporate safe infrastructure for walking in the local roadway system Create trails to promote fitness and reduce traffic Encourage walking to promote health in Mississippi



Tools and References

PRINCIPLES	TOOLS and LINKS
<p style="text-align: center;">Housing & Neighborhoods: Create a range of housing choices and opportunities</p>	<p>Provide a range of local housing types for people at all stages of life <i>Affordable Housing & Smart Growth: Making the Connection</i> www.epa.gov/smartgrowth/pdf/epa_ah_sg.pdf</p> <p><i>Aging in Place Initiative</i> http://www.aginginplaceinitiative.org/</p> <p>Create Community Land Trusts to lower the cost of housing <i>Community Land Trust Network</i> www.cltnetwork.org/</p> <p><i>North Gulfport Community Land Trust</i> www.ngclt.org/</p> <p>Model Ordinances and Permits <i>Getting to Smart Growth: 100 Policies for Implementation</i> http://www.smartgrowth.org/pdf/gettosg.pdf</p> <p><i>Inclusionary Zoning Model Ordinance</i> www.planning.org/research/smartgrowth/pdf/section44.pdf</p> <p><i>Accessory Dwelling Unit Permit, Town of Cary, N.C.</i> http://www.townofcary.org/Assets/Planning+Department/Applications/Accessory+Use+(dwelling)+Permit+Jun+09.pdf</p>

Bookmarks

- Cover Page
- Introduction
- Community Character
 - Fix It First
 - Mixed-Use Districts
 - Housing & Neighborhoods
- Transportation Choices
 - Complete Streets
 - Tackling Traffic
 - Bicycle and Pedestrian Paths
 - Alternative Parking
- Resiliency & Natural Hazards
 - Evaluating Your Assets
 - Protecting People & Places
 - Structural Solutions
- Policy in Practice
 - Development Review
 - Public Participation
 - Quality Control
- Growing Green
 - Green Streets
 - Conserve &

Print



SMART GROWTH & SUSTAINABILITY

for the Mississippi Gulf Coast



*A Guide to Sustainable and Resilient Living
Along the Mississippi Gulf Coast*



©2011



SMART GROWTH

for the Mississippi Gulf Coast

Smart, sustainable growth in coastal areas creates close-knit communities that enjoy both the environmental and economic value of their natural surroundings. By discouraging sprawl and producing compact, transit-oriented, walkable neighborhoods, cities can meet the growing desire of homeowners and business to invest not just in a property, but a place. Coastal areas will find solutions in this Toolbox to achieve a unique sense of community; expand the range of transportation, employment, and housing choices; equitably distribute the costs and benefits of development; preserve and enhance natural and cultural resources; and improve their resiliency from natural hazards.

Click on items in the illustration or on topics below to learn more | [Download *Toolbox for Smart Growth & Sustainability for the Mississippi Gulf Coast*](#)



Identify Policy Problem

Community

Community character is a key factor in where people want to live. Businesses and residents want to live in areas that preserve the strengths of established neighborhoods before expanding into new areas. Spending money for new infrastructure in areas that are resilient to natural disasters and smart growth creates value.

Oyster Bayou is a key feature of the Gulf of Mexico. Awareness of the importance of the bayou helps protect the environment.

Oyster Bayou offers a large area for a couple thousand neighbors. The nearby area has a similar lifestyle and homeowners are right there.



Community Character: Fix It First

One of the main goals of Smart Growth is to reduce urban sprawl and create close-knit communities. This can be achieved by prioritizing growth and development in existing neighborhoods. Some of the most successful strategies to reach this goal incorporate "working with what you have," such as the ones listed below.

- Preservation of Historic Areas
- Fix-it-First Infrastructure Programs
- Reusing Vacant Lots and Brownfield

Preservation of Historic Areas

Preserving historic buildings and neighborhoods protects community character while reducing economic and environmental impacts associated with demolition and disposal. The [National Trust for Historic Preservation](#) found that repairing historic structures has a positive impact on investment and real estate values. Historic structures become desirable places to live and work largely because of their architectural uniqueness. Historic renovation projects also generate more jobs than the new construction of similar-sized projects.



Historic buildings, like this former bus station renovated by the Gulfport Main Street Program, offer architectural uniqueness. Photo provided by Gulfport Main Street.



A historic bank building in downtown Gulfport, MS, gets a facelift after suffering damage from Hurricane Katrina. Photo by Kimberly Miller, AKCP.

Fix-it-First Infrastructure Programs

When cities repair and maintain existing infrastructure before extending new roads, water and sewer lines into undeveloped areas, they create incentives to invest in settled areas. In the EPA's book, [Using Smart Growth Techniques as Stormwater Best Management Practices](#), authors explain how a public works department might reduce sprawl by implementing a "fix-it first" budgetary policy. This would place the first spending priorities on repair, operations and maintenance. A sample goal might be to fix 25% of existing water infrastructure over five years.

Infrastructure investment lays the foundation for development, redevelopment, or infill of land in existing neighborhoods and business districts. Redevelopment occurs in areas that have already been developed. It can take place site-by-site or as part of a larger effort to spur investment and development activity. Gulfport, Mississippi's [Main Street Program](#) attracted developers to reinvest in downtown after Hurricane Katrina with financial and regulatory incentives. It is currently restoring the exteriors of more than eighty buildings in Downtown Gulfport. Redevelopment also helps preserve open land in surrounding areas, thus lowering flood risks and stormwater management expenses.¹

choices of where
builds up the
infrastructure
cities to save
development is more
through new

*to the Gulf of
Growth can*

ent town. It
visiting, the
between
the safe path to
nities for a
s for
what they need

Comparable Sustainable Approach

Second Annual Report on the Economic Impact of the Federal Historic Tax Credit

THE HISTORIC TAX CREDIT COALITION

MAY 2011



Using Smart Growth Techniques as
Stormwater Best
Management Practices

The EPA Brownfields Program Produces Widespread Environmental and Economic Benefits

EPA's Brownfields Program empowers states, communities, and other stakeholders to work together to prevent, assess, safely cleanup, and sustainably reuse brownfields. Revitalizing brownfield sites creates benefits at the site and throughout the community.

Leveraging Money for Assessment, Cleanup and Revitalization of Brownfields
Based on data from grantee reporting and through the Program's ACRES database, through fiscal year 2011, on average, **\$18.28 is leveraged** for each EPA Brownfields dollar expended at a brownfield from Assessment, Cleanup, and Revolving Loan Fund cooperative agreements since Program inception.

Leveraging Jobs from EPA Brownfields Dollars Spent to Assess, Clean and Revitalize Brownfields
Based on data through fiscal year 2011, on average, **7.43 jobs are leveraged per \$100,000 of EPA Brownfields funding** expended on Assessment, Cleanup and Revolving Loan Fund cooperative agreements since program inception. As of January 2012, **74,557 jobs have been leveraged** through the Brownfields Program including the State and Tribal (ST26a) program since its inception.

Environmental (Air and Water) Benefits of Brownfields Redevelopment
The EPA Brownfields Program has conducted five pilot studies, which concluded that redeveloped brownfield sites tend to have greater location efficiency than alternative development scenarios at greenfield sites, resulting in a **32 to 57 percent reduction in vehicle miles traveled** associated with these sites and a reduction in air pollution emissions, including greenhouse gases. These same site comparisons show an estimated **47 to 62 percent reduction in stormwater runoff**. The studies suggest a range of impacts due to regional variation in development and travel patterns.

Additional Benefits of Brownfields Redevelopment
The EPA Brownfields Program has funded a study to assess the impact, or economic benefit, of Brownfields grants on residential property values. The study concluded that **residential property values increased between 2 and 3 percent** once a nearby brownfield was assessed or cleaned up. The study further concluded that cleaning up a brownfield can increase overall property values within a one mile radius by \$0.5 to \$1.5 million. Additionally, initial anecdotal surveys indicate a **reduction in crime** in recently revitalized brownfield areas.

Opportunity to Expand Assessment Program and Leverage from Benefits of Agency's Removal Program
As is apparent from the numbers, there is a huge demand for site assessment work. The Program can expand upon recent policy clarifications to use site assessment dollars for environmental site assessments in conjunction with efforts to promote area-wide planning among areas and corridors of brownfield sites. The use of funds for these purposes is particularly important for economically distressed areas to enable the identification of infrastructure capacity along with potential end users. Also, in certain instances when environmental site assessments reveal immediate threats to the environment or human health, a more programmatic use of EPA Removal funds to address these threats could be implemented.

www.epa.gov/brownfields • Updated as of January 2012



Fish Branch Park, Columbia, Missouri

Find Model Ordinance

PASS CHRISTIAN SMART CODE



Complete Including Text of Adopted Community Plans

City of Pass Christian, Mississippi
Version 1.12 Approved 16 June 2009

TABLE OF CONTENTS

SMARTCODE
City of Pass Christian, Mississippi

ARTICLE 1. GENERAL TO ALL PLANS

- 1.1 AUTHORITY
- 1.2 INTENT
- 1.3 APPLICABILITY
- 1.4 PROCESS
- 1.5 APPROVAL OF PLANS;
WARRANTS AND VARIANCES
- 1.6 INCENTIVES

ARTICLE 2. SECTOR-SCALE PLANS

- 2.1 INSTRUCTIONS
- 2.2 SUCCESSION
- 2.3 (O-1) PRESERVED OPEN SECTOR
- 2.4 (O-2) RESERVED OPEN SECTOR
- 2.5 (G-1) RESTRICTED GROWTH SECTOR
- 2.6 (G-2) CONTROLLED GROWTH SECTOR
- 2.7 (G-3) INTENDED GROWTH SECTOR
- 2.8 (G-4) INFILL GROWTH SECTOR
- 2.9 (SD) SPECIALIZED DISTRICT

ARTICLE 3. NEW COMMUNITY-SCALE PLANS

- 3.1 INSTRUCTIONS
- 3.2 TRANSECT ZONES
- 3.3 COMMUNITY TYPES
- 3.4 DENSITY CALCULATIONS
- 3.5 ENVIRONMENTAL REQUIREMENTS
- 3.6 STREETScape REQUIREMENTS
- 3.7 CIVIC FUNCTIONS
- 3.8 SPECIAL REQUIREMENTS

ARTICLE 4. EXISTING COMMUNITY-SCALE PLANS

- 4.1 INSTRUCTIONS
- 4.2 TRANSECT ZONES
- 4.3 COMMUNITY TYPES
- 4.4 CIVIC FUNCTIONS
- 4.5 SPECIAL REQUIREMENTS
- 4.6 PRE-EXISTING CONDITIONS
- 4.7 DENSITY REQUIREMENTS

ARTICLE 5. BUILDING-SCALE PLANS

- 5.1 INSTRUCTIONS
- 5.2 SPECIFIC TO T1 & T2 ZONES
- 5.3 SPECIFIC TO T3 ZONES
- 5.4 SPECIFIC TO T4 ZONES
- 5.5 SPECIFIC TO T5 ZONES
- 5.6
- 5.7 CIVIC FUNCTIONS
- 5.8 SPECIAL REQUIREMENTS
- 5.9 PRE-EXISTING CONDITIONS
- 5.10 BUILDING & FLOOD CODE COMPLIANCE
- 5.11 HISTORIC PRESERVATION DISTRICT
- 5.12 SPECIAL EMERGENCY PROVISIONS
- 5.13 DENSITY LIMITS, BONUSES, TRANSFERS

ARTICLE 6. STANDARDS & TABLES

- TABLE 1 TRANSECT ZONE DESCRIPTIONS
- TABLE 2 SECTOR/COMMUNITY ALLOCATION
- TABLE 3A VEHICULAR LANE DIMENSIONS
- TABLE 3B VEHICULAR LANE/PARKING ASSEMBLIES
- TABLE 3C THOROUGHFARE ASSEMBLIES
- TABLE 4A PUBLIC FRONTAGE - GENERAL
- TABLE 4B PUBLIC FRONTAGE - SPECIFIC
- TABLE 5 PUBLIC LIGHTING
- TABLE 6 PUBLIC PLANTING
- TABLE 7 PRIVATE FRONTAGE
- TABLE 8 BUILDING CONFIGURATION
- TABLE 9 BUILDING DISPOSITION
- TABLE 10 BUILDING FUNCTION - SPECIFIC
- TABLE 11 BUILDING FUNCTION - GENERAL
- TABLE 12 PARKING CALCULATION
- TABLE 13 CIVIC SPACE
- TABLE 14 SUMMARY OF TRANSECT ZONES
- TABLE 15 SUMMARY OF SPECIAL DISTRICTS
- TABLE 16 DEFINITIONS ILLUSTRATED

ARTICLE 7. DEFINITIONS OF TERMS

ARTICLE 8. ADOPTED COMMUNITY PLANS



Survey of Potential Users

- Majority of respondents said a Smart Growth and Resiliency Toolbox would be “Very useful”
- Smart growth tools and Coastal sustainability and resiliency were the subjects of greatest interest
- Fewer than 50% that they were aware of Smart Growth practices in place in their own jurisdictions
- 83% of respondents with a Smart Growth program wanted to see a more effective use of local **Practices**
- More than half get their Smart Growth info from State Agency websites and want the toolbox available online



Intended Outcomes

- Gulf Coast Communities Adopt Sustainable Development Policies
- Resilience to Natural Hazards is Improved as a Result of Better Education, Siting and Construction Practices
- County & City Departments Incorporate Best Management Practices for Infrastructure and Routine Operations
- A New Sustainable Project Will be Planned as a Site-Specific Demonstration of How to Use the Toolbox