



# The Mississippi Gulf Region

*A Regional Framework for Renewal*

*A Consolidated Report  
of the  
Regional Planning  
Environment, and  
Transportation Teams*

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November 9, 2005

## Regional Setting

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
- Medium Term
- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Regional Setting

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

Name of Contact for Additional Information

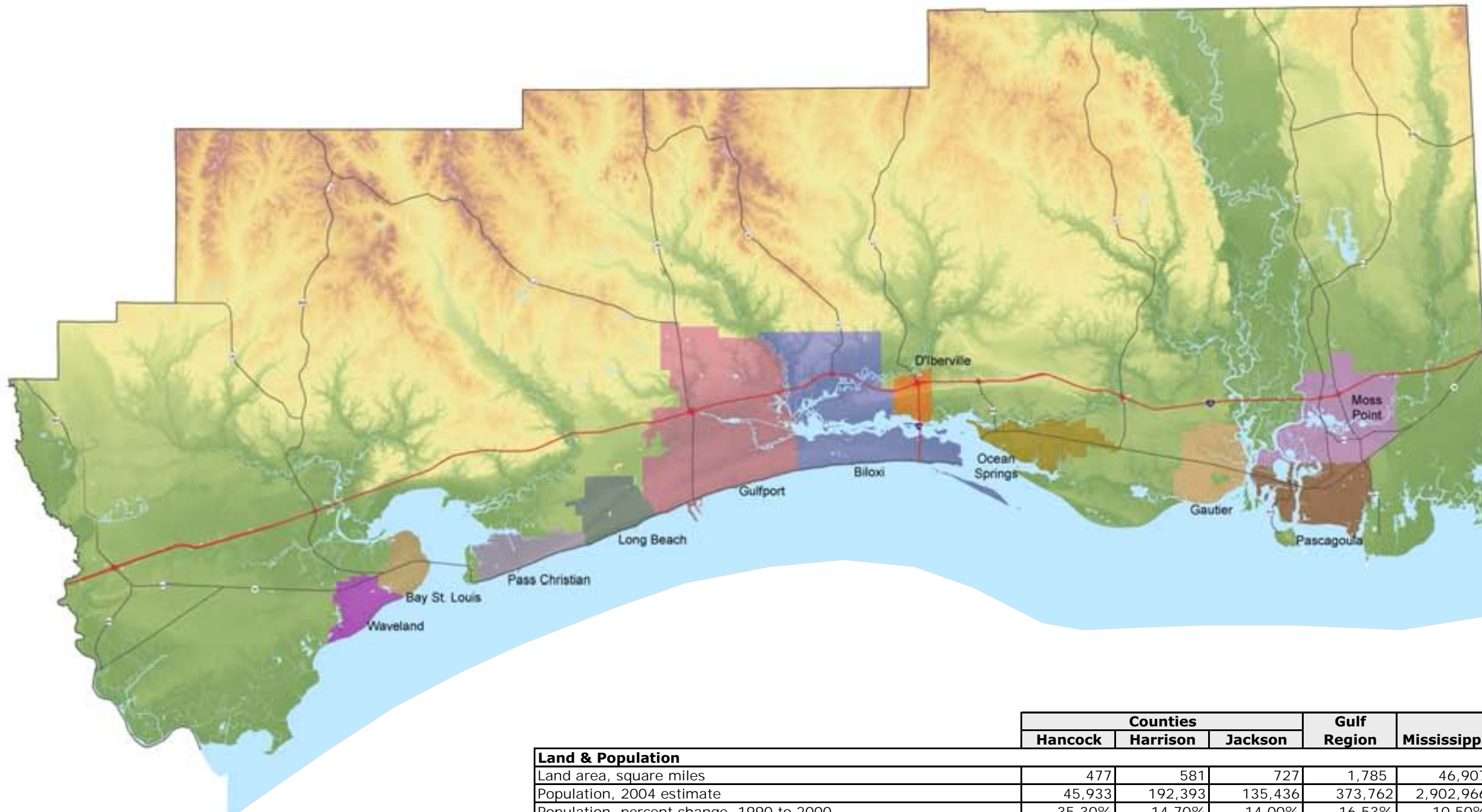
eliot@crit.com

E-mail address

### NARRATIVE:

The Mississippi Gulf Coast Region is a three-county coastal corridor stretching approximately 110 miles between Louisiana and Alabama.

The region encompasses 11 municipalities and a roughly equal number of unincorporated communities and hamlets.



	Counties			Gulf Region	Mississippi
	Hancock	Harrison	Jackson		

	Hancock	Harrison	Jackson	Gulf Region	Mississippi
<b>Land &amp; Population</b>					
Land area, square miles	477	581	727	1,785	46,907
Population, 2004 estimate	45,933	192,393	135,436	373,762	2,902,966
Population, percent change, 1990 to 2000	35.30%	14.70%	14.00%	16.53%	10.50%
Persons per square mile, 2000	90.1	326.3	180.8	203.9	60.6
<b>Demographics</b>					
White persons, percent, 2000	90.19%	73.10%	75.40%	75.96%	61.40%
Black or African American persons, percent, 2000	6.83%	21.10%	20.90%	19.33%	36.30%
Asian persons, percent, 2000	0.88%	2.60%	1.60%	2.02%	0.70%
Median household income, 1999	\$35,202	\$35,624	\$39,118		\$31,330
Persons below poverty, percent, 1999	14.40%	14.60%	12.70%	13.53%	19.90%
High school graduates, percent of persons age 25+, 2000	77.90%	80.30%	81.00%		72.90%
Bachelor's degree or higher, pct of persons age 25+, 2000	17.30%	18.40%	16.50%		16.90%
<b>Housing</b>					
Housing units, 2002	22,363	83,631	54,035	160,029	1,195,133
Housing units authorized by building permits, 2002	117	1,403	818	2,338	11,276
Housing units, percent change, 2000 to 2002	6.10%	5.00%	4.60%	4.78%	2.90%
Homeownership rate, 2000	79.60%	62.70%	74.60%		72.30%
Median value of owner-occupied housing units, 2000	\$92,500	\$87,200	\$80,300		\$71,400
<b>Commuting</b>					
Mean travel time to work (minutes), workers age 16+, 2000	32.5	21.8	23.7		24.6



# Regional Economy

Place or Topic

**DRAWING TYPE**

- Analytical
- Proposal

**TIMING**

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- Long Term

**URBAN SCALE**

- Street, Blocks, Building
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- Region

**IMPLEMENTATION THROUGH**

- Design
- Policy
- Management

**Economic Focus Areas**

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

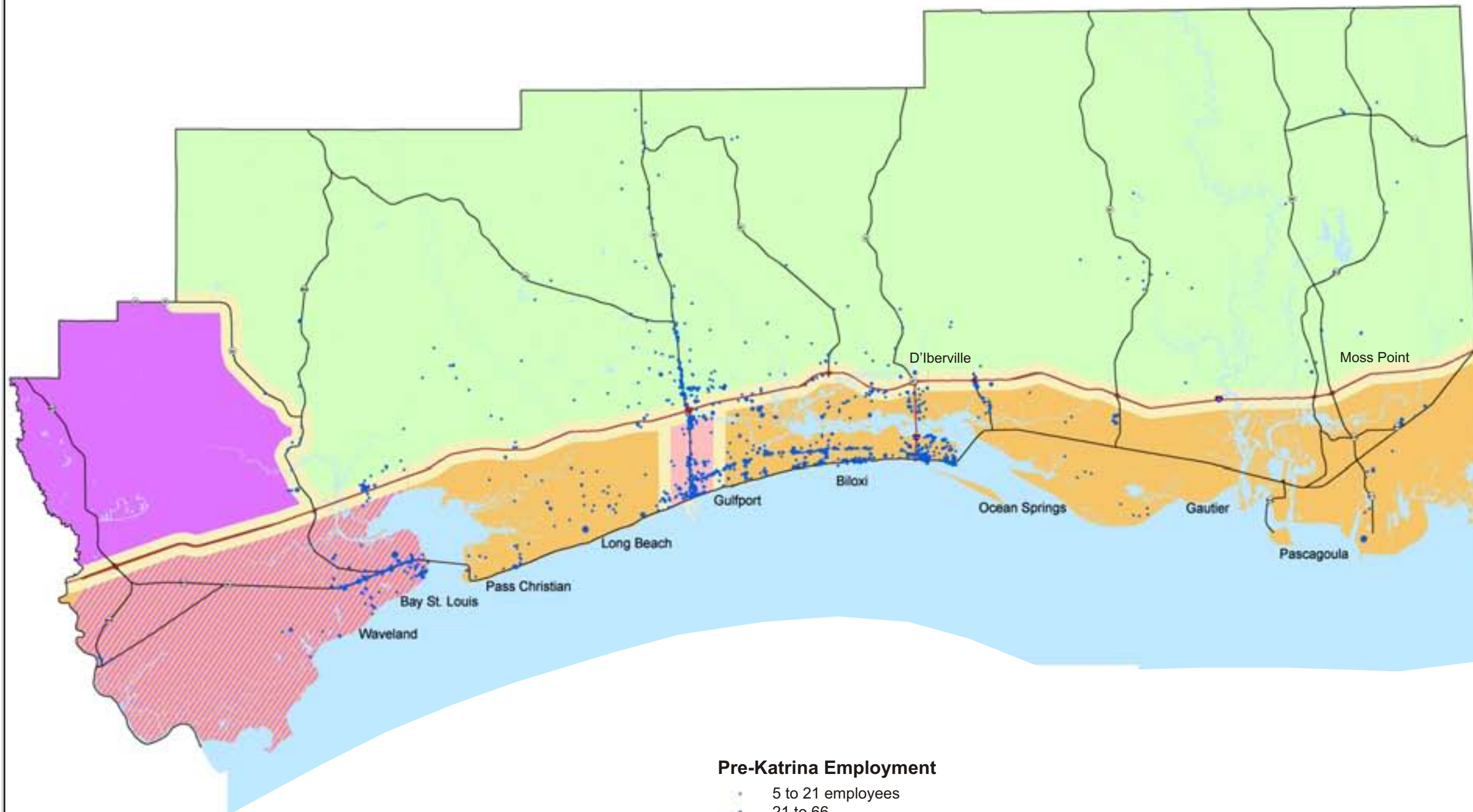
Name of Contact for Additional Information

eliot@crit.com

E-mail address

**NARRATIVE:**

Building on the region's existing employment base, economic development policy can focus on location-based assets that are linked to smart growth, environmental protection, and infrastructure efficiency.



**Pre-Katrina Employment**

- 5 to 21 employees
- 21 to 66
- 66 to 170
- 170 to 600
- 600 to 2000

**Long Term Focus Areas**

- Coastal Core: retail, gaming, eco-tourism, govt. services, industry
- Resource-based
- Space technology
- Port-oriented
- Coastal core and space technology



# Flood Hazards

Place or Topic

**DRAWING TYPE**

- Analytical
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**TIMING**

- Immediate
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- Region

**IMPLEMENTATION THROUGH**

- Design
- Policy
- Management

Flood Hazards

Drawing Title

10/28/05

Date

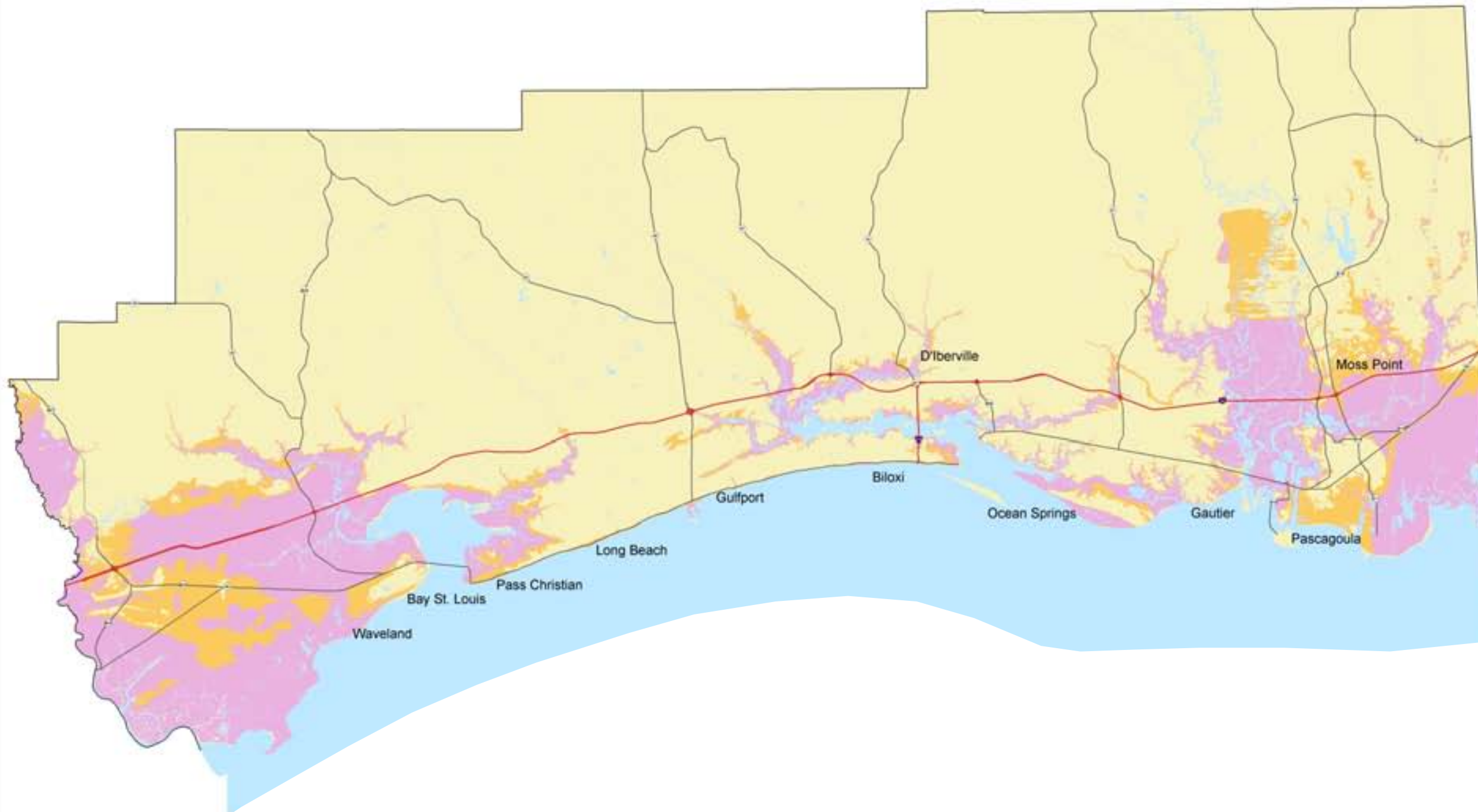
FEMA

Name of Contact for Additional Information

E-mail address

**NARRATIVE:**

One of the region's greatest environmental challenges is reconciling coastal redevelopment and growth with flood hazards. The estimated 100-year event shown here is a generalized summary of preliminary information from the FEMA publication "Draft Report: Hurricane Katrina Flood Frequency Analysis, Harrison, Hancock, and Jackson Counties Mississippi, September 2005."



**Estimated 100 Year Event**  
 Flooding  
 Flooding With Wave Action





## Interstate Rail

Place or Topic

### DRAWING TYPE

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- Long Term

### URBAN SCALE

- Street, Blocks, Building
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- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Interstate Rail Network

Drawing Title

10/28/05

Date

Shelley Poticha

Name of Contact for Additional Information

spoticha@reconnectingamerica.org

E-mail address

### NARRATIVE:

A unique convergence of public and private interests can accomplish relocation of the region's main freight and passenger rail line from its current coastal location to an inland alignment shown here conceptually. If implemented, Gulf coast residents could travel to New Orleans, Jackson, or Mobile in under an hour, while making the former CSX coastal right-of-way available for reuse as a multi-modal corridor linking the region's largest urban areas.





## Multi-Modal Travel

Place or Topic

### DRAWING TYPE

- Analytical
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### TIMING

- Immediate
- Medium Term
- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Multi-Modal Travel System

Drawing Title

10/28/05

Date

Shelley Poticha

Name of Contact for Additional Information

[spoticha@reconnectingamerica.org](mailto:spoticha@reconnectingamerica.org)

E-mail address

### NARRATIVE:

A multi-modal network of transit, ferries, bikeways, promenades, and trails can reinforce the vitality of neighborhoods and connect town centers. The system concept shown here is anchored by conversion of the Highway 90/CSX right-of-way into a multi-modal corridor; creation of a new truck and evacuation route from the Gulfport port to I-10; and returning the elevated portion of I-110 to grade level when it enters Biloxi.





# Park & Schoolyard Walksheds

Place or Topic

## DRAWING TYPE

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- Immediate
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## URBAN SCALE

- Street, Blocks, Building
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- Region

## IMPLEMENTATION THROUGH

- Design
- Policy
- Management

## Park & Schoolyard Walksheds

Drawing Title

11/9/05

Date

Eliot Allen

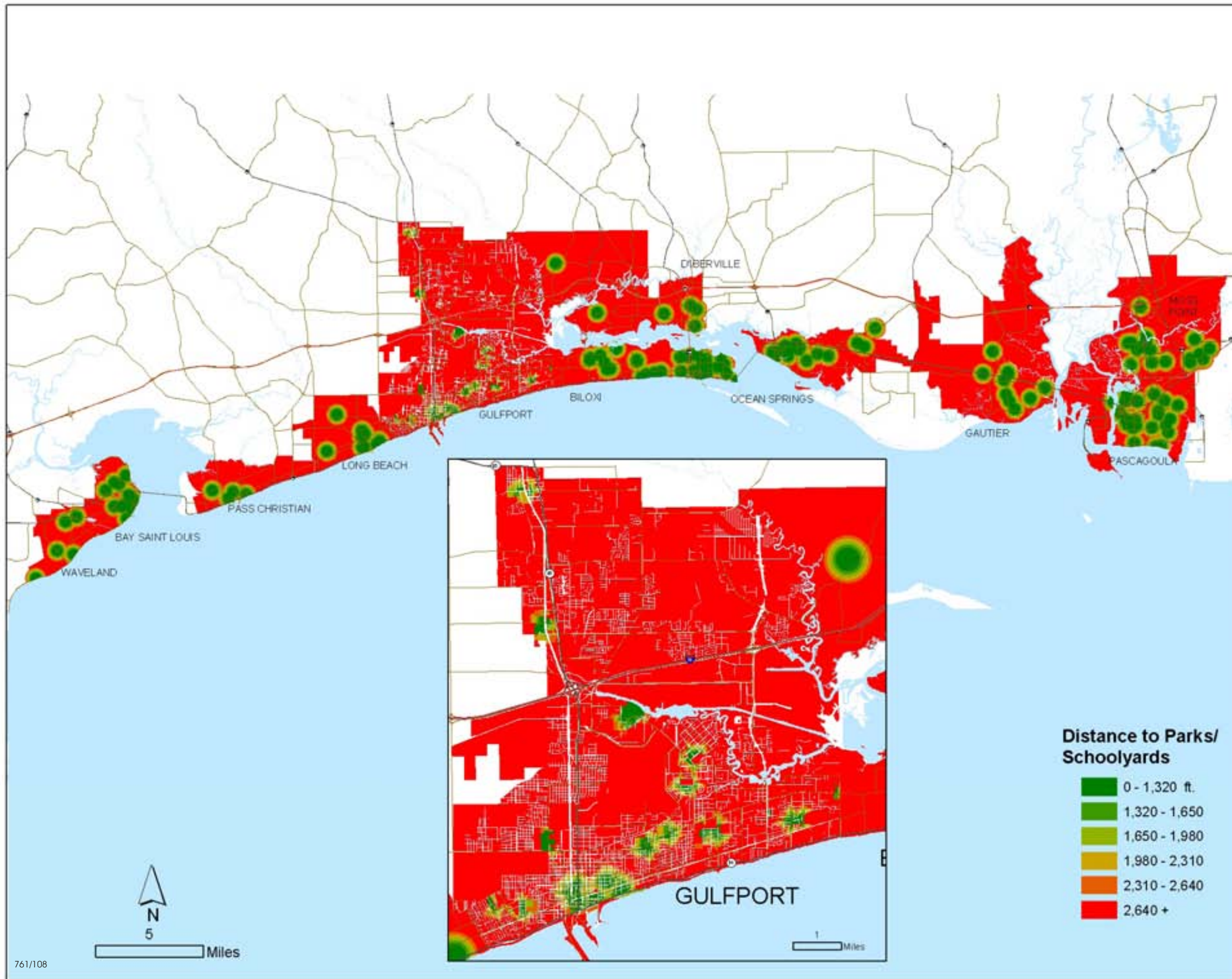
Name of Contact for Additional Information

Eliot@crit.com

E-mail address

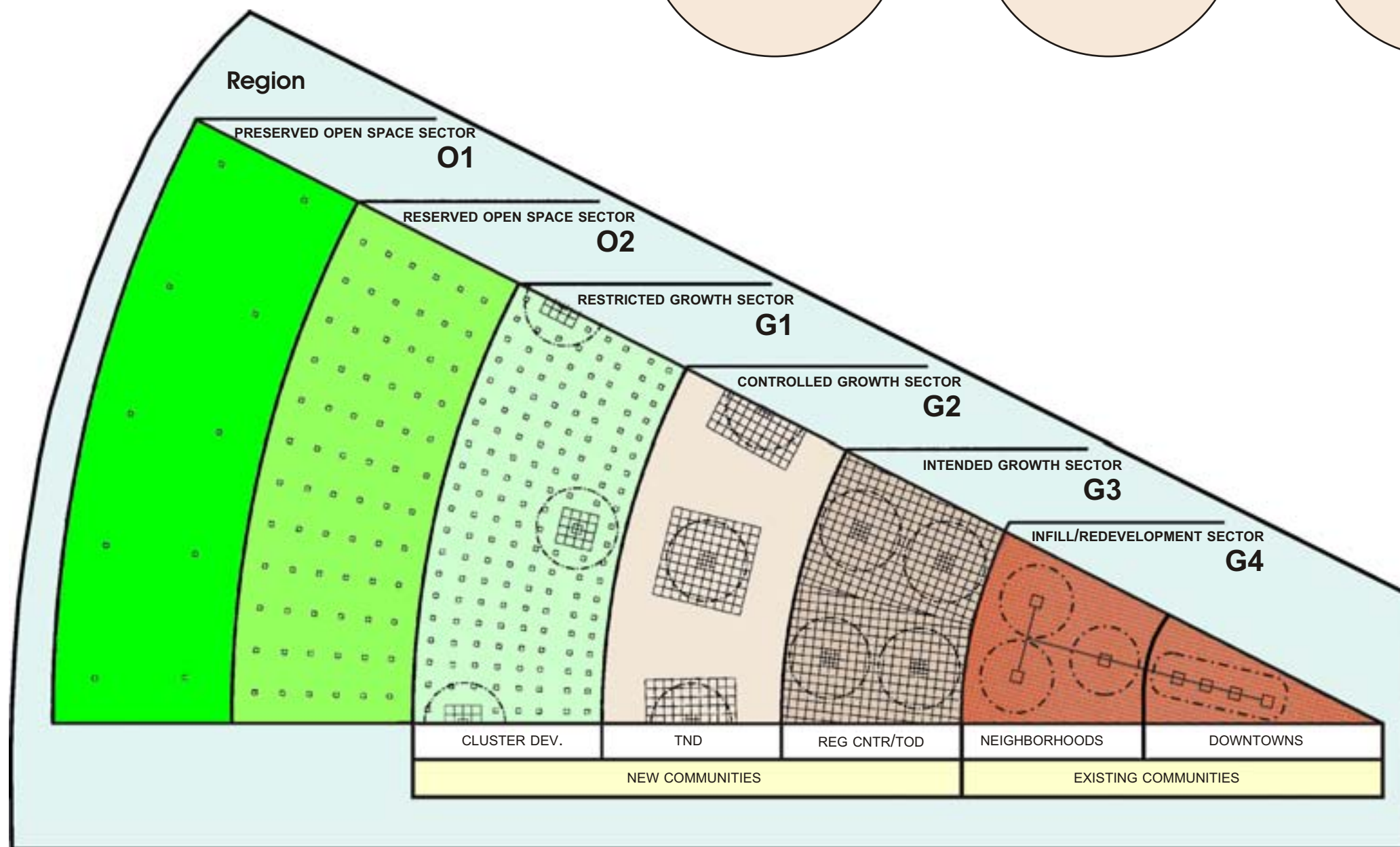
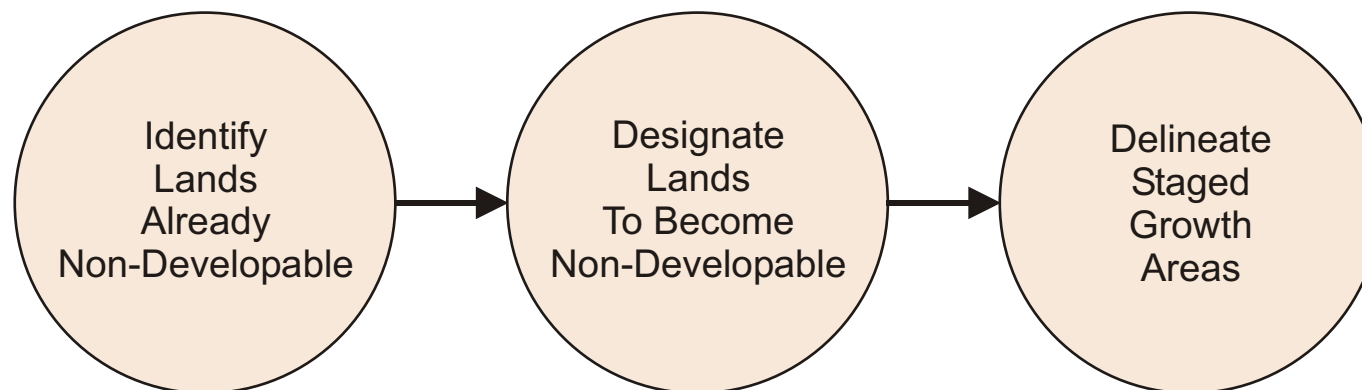
## NARRATIVE:

A key piece of regional and community livability is walkable access to parks and schoolyards. The walksheds shown here illustrate varying levels of access across the region and within communities (Gulfport is shown using actual walking routes while other municipalities are shown with straight-line radius walksheds).





**Assembling a Regional Growth Transect**



**Regional Growth Transect**

Place or Topic

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- Region

**IMPLEMENTATION THROUGH**

- Design
- Policy
- Management

**Regional Transect**

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

Name of Contact for Additional Information

eliot@crit.com

E-mail address

**NARRATIVE:**

A regional transect can guide growth in the most efficient, coordinated, and sustainable manner. Applying local action to this regional framework is the key to realizing its vision.

The following sector delineations have boundaries that are generalized and will require further ground-truthing. Also, the following sector maps are exclusive of pending development projects in the region.



## Preserved Open Space

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
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### URBAN SCALE

- Street, Blocks, Building
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- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Preserved Open Space Sector

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

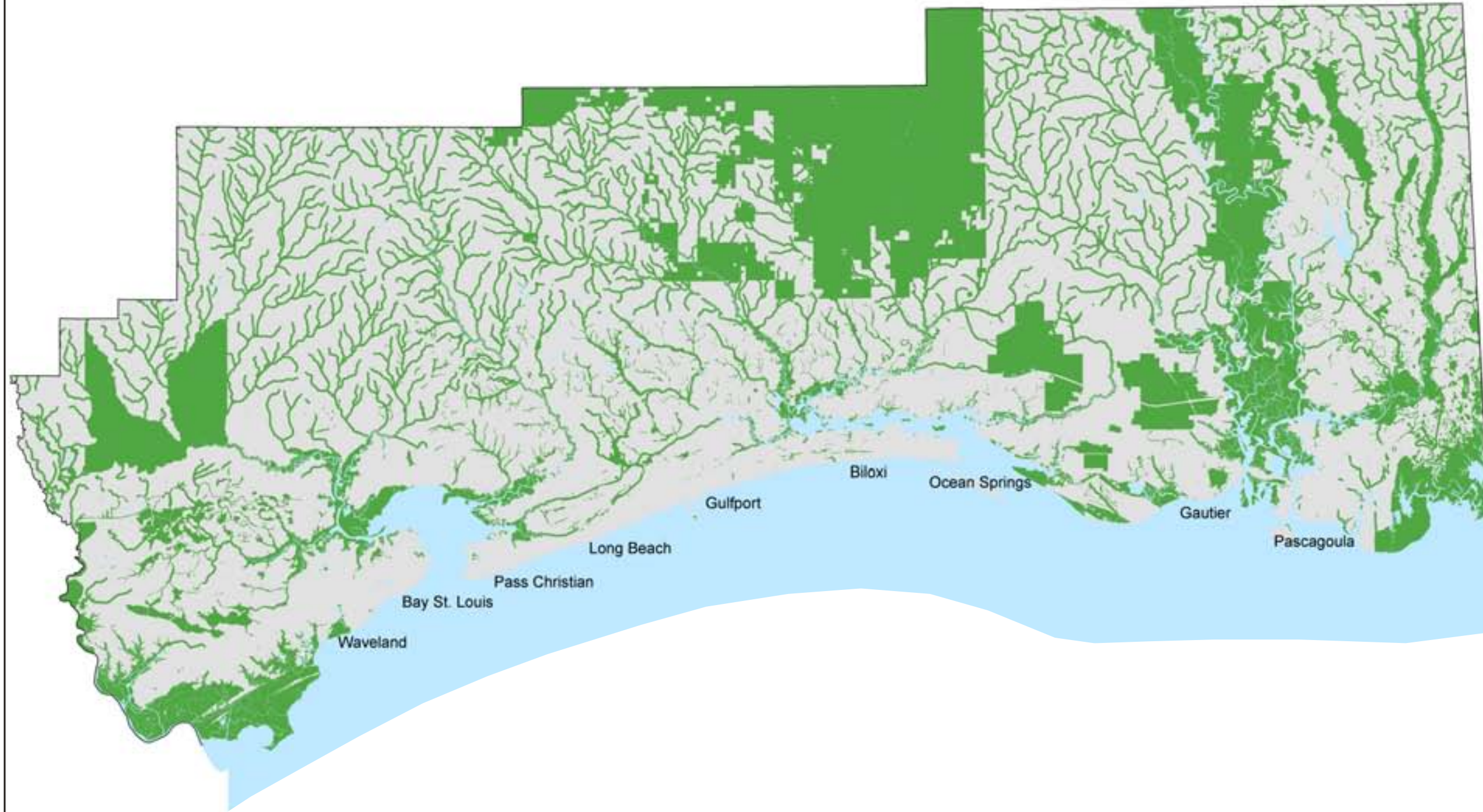
Name of Contact for Additional Information

eliot@crit.com

E-mail address

### NARRATIVE:

The Preserved Open Space Sector O1 is composed of non-developable areas, including surface waters, wetlands, 300 ft. stream buffers, public wildlife management areas, state parks, and national forests and wildlife refuges.



O1 Preserved Open Space (385,000 acres)



## Reserved Open Space

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
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- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Reserved Open Space Sector

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

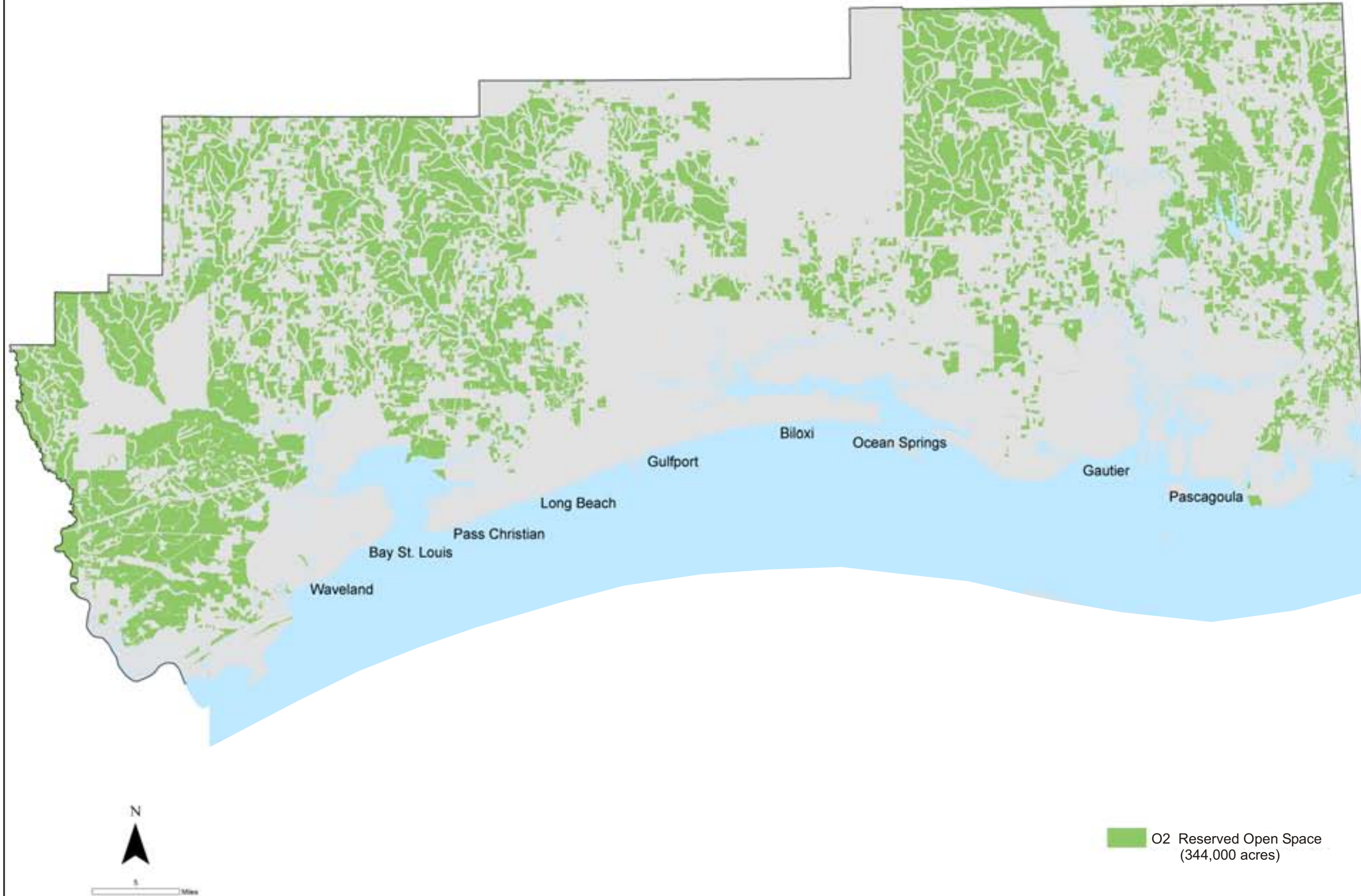
Name of Contact for Additional Information

eliot@crit.com

E-mail address

### NARRATIVE:

The Reserved Open Space Sector O2 is composed of parcels larger than 20 acres outside of incorporated cities and wastewater service areas that are either vacant or in agricultural/forestry use. The O2 sector is a "sending" sector that transfers development rights to growth sectors while its lands are being elevated to O1 status over time.





## Infill & Redevelopment

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
- Medium Term
- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Infill & Redevelopment Sector

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

Name of Contact for Additional Information

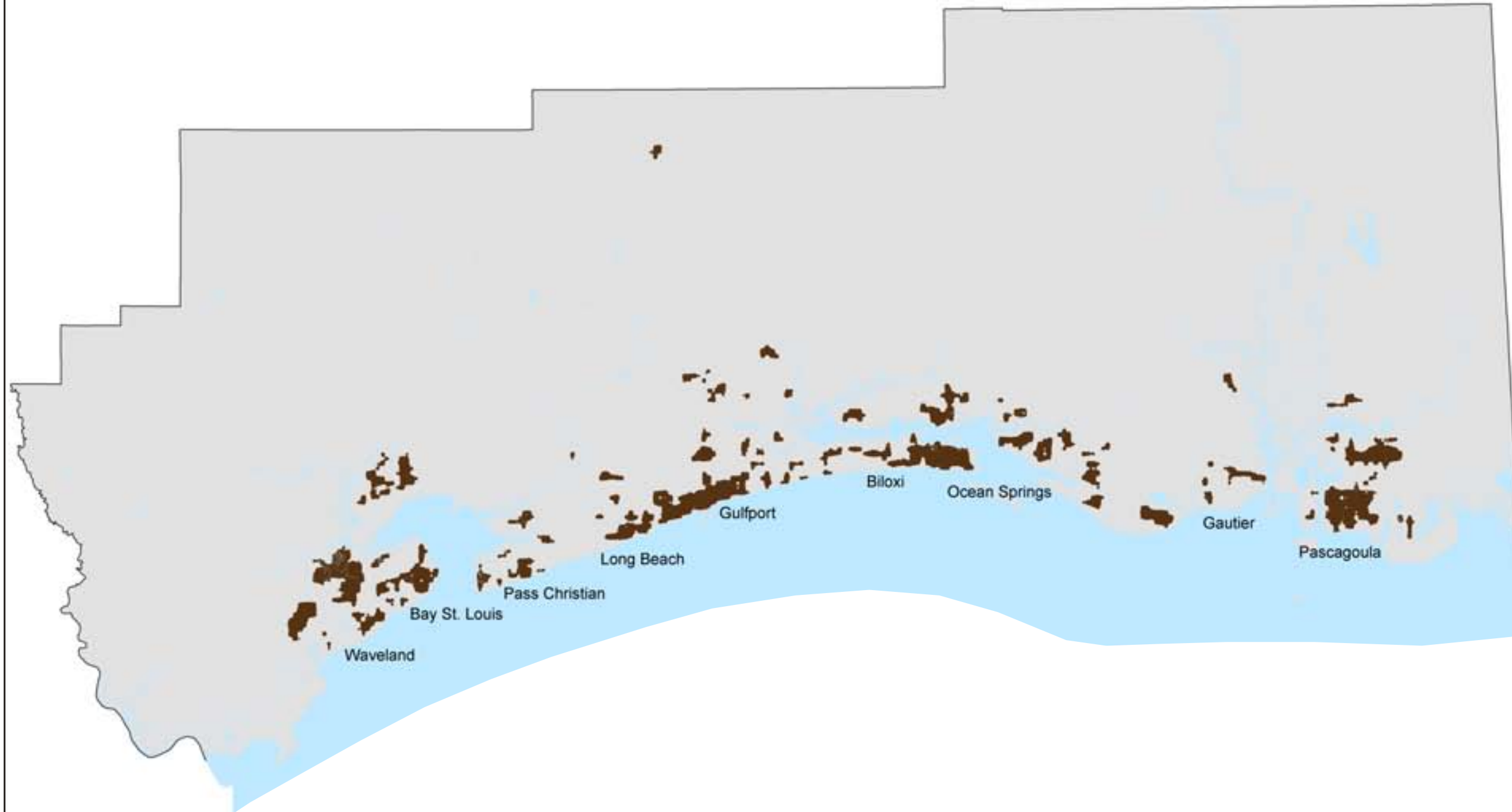
eliot@crit.com

E-mail address

### NARRATIVE:

The Infill and Redevelopment Sector G4 is composed of areas larger than 30 acres possessing a street network density greater than 20 centerline miles per square mile. This threshold identifies areas with short walkable blocks and existing urban-level infrastructure.

Given their economic assets, transportation accessibility, and infrastructure commitments, G4 lands become a top priority sector for accommodating growth.



G4 Infill & Redevelopment  
(31,000 acres)



## Intended Growth

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
- Medium Term
- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Intended Growth Sector

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

Name of Contact for Additional Information

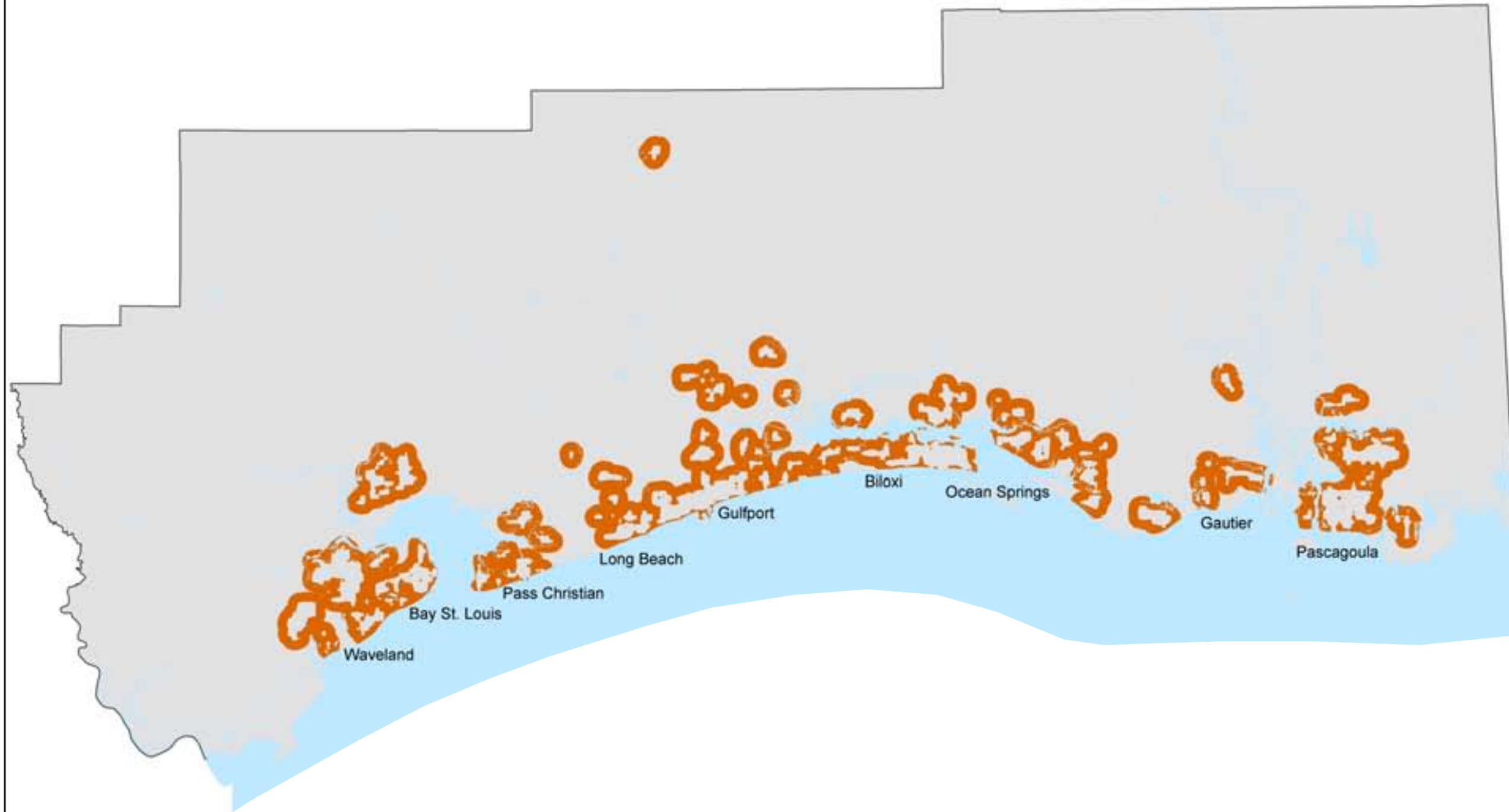
eliot@crit.com

E-mail address

### NARRATIVE:

The Intended Growth Sector G3 is composed of one-half mile buffers around G4 lands, exclusive of any lands already designated O1.

Given their immediate proximity to G4 infill and redevelopment areas, G3 lands become a second priority area for accommodating growth.



G3 Intended Growth  
(81,000 acres)



## Controlled Growth

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
- Medium Term
- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Controlled Growth Sector

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

Name of Contact for Additional Information

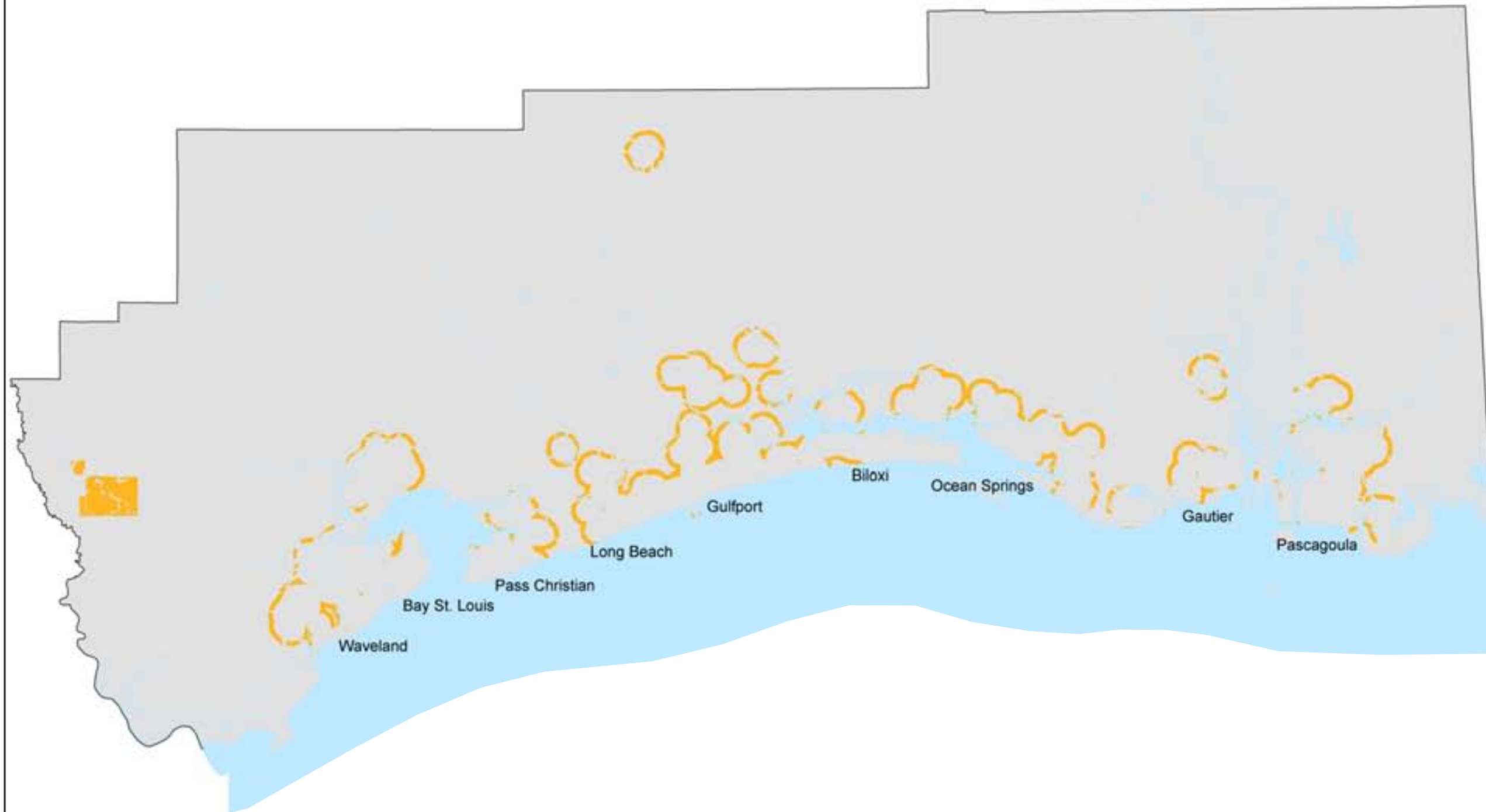
eliot@crit.com

E-mail address

### NARRATIVE:

The Controlled Growth Sector G2 is composed of one-quarter mile buffers around G3 lands, excluding any O1 lands.

Based on their increasing distance from G4 infill and redevelopment areas, these G2 lands are intended for modest-scale traditional neighborhood development where transportation accessibility is adequate.



**G2 Controlled Growth**  
(24,000 acres)

## Restricted Growth

Place or Topic

### DRAWING TYPE

- Analytical
- Proposal

### TIMING

- Immediate
- Medium Term
- Long Term

### URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

### IMPLEMENTATION THROUGH

- Design
- Policy
- Management

### Restricted Growth Sector

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

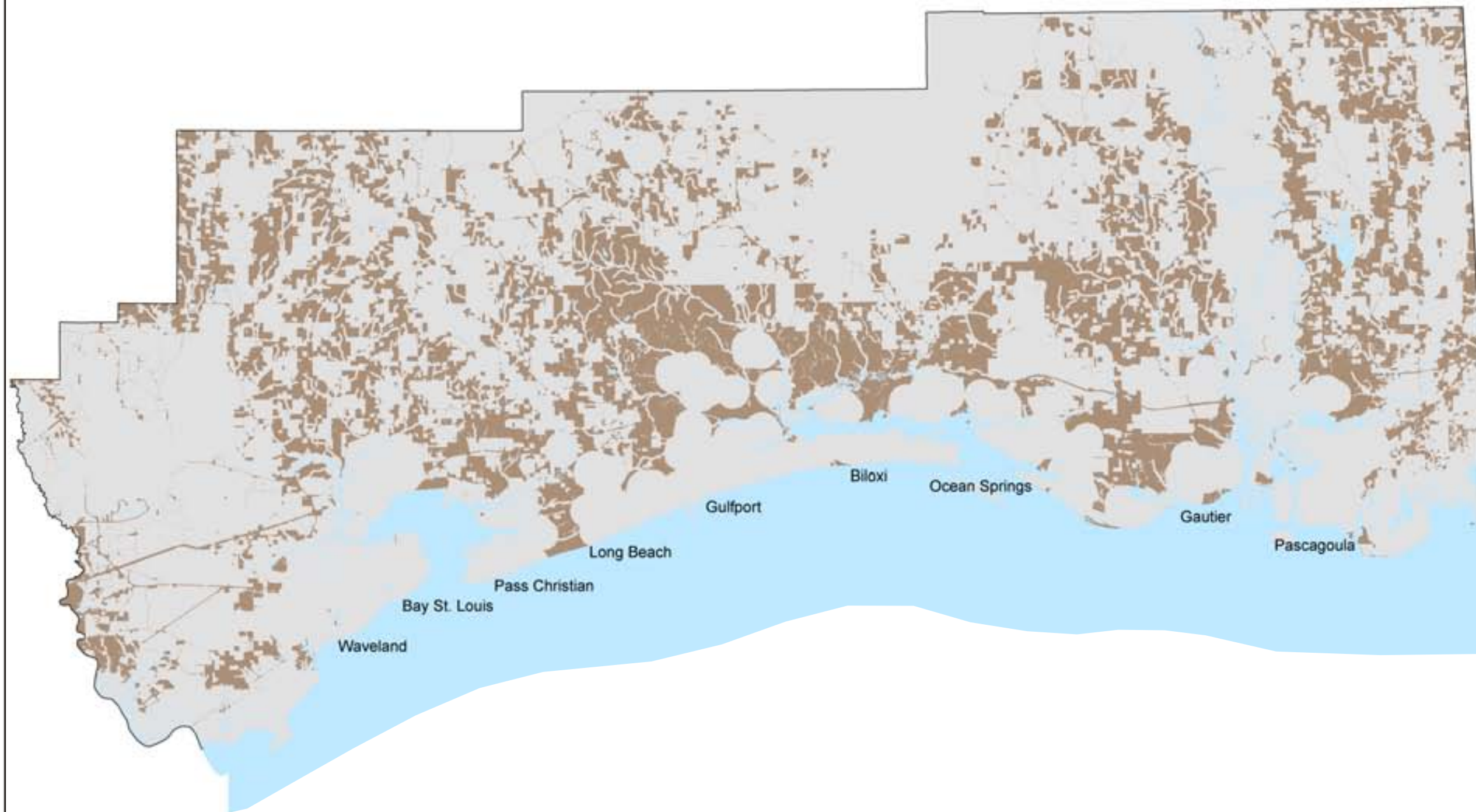
Name of Contact for Additional Information

eliot@crit.com

E-mail address

### NARRATIVE:

The Restricted Growth Sector G1 is composed of all land not designated in other sectors. G1 is the most environmentally-sensitive growth sector, with development limited to small hamlets and clustered residences.



G1 Restricted Growth  
(270,000 acres)



# Regional Growth Transect

Place or Topic

## DRAWING TYPE

- Analytical
- Proposal

## TIMING

- Immediate
- Medium Term
- Long Term

## URBAN SCALE

- Street, Blocks, Building
- Neighborhood, District, Corridor
- Region

## IMPLEMENTATION THROUGH

- Design
- Policy
- Management

## Regional Growth Transect

Drawing Title

10/28/05

Date

Eliot Allen, Criterion Planners

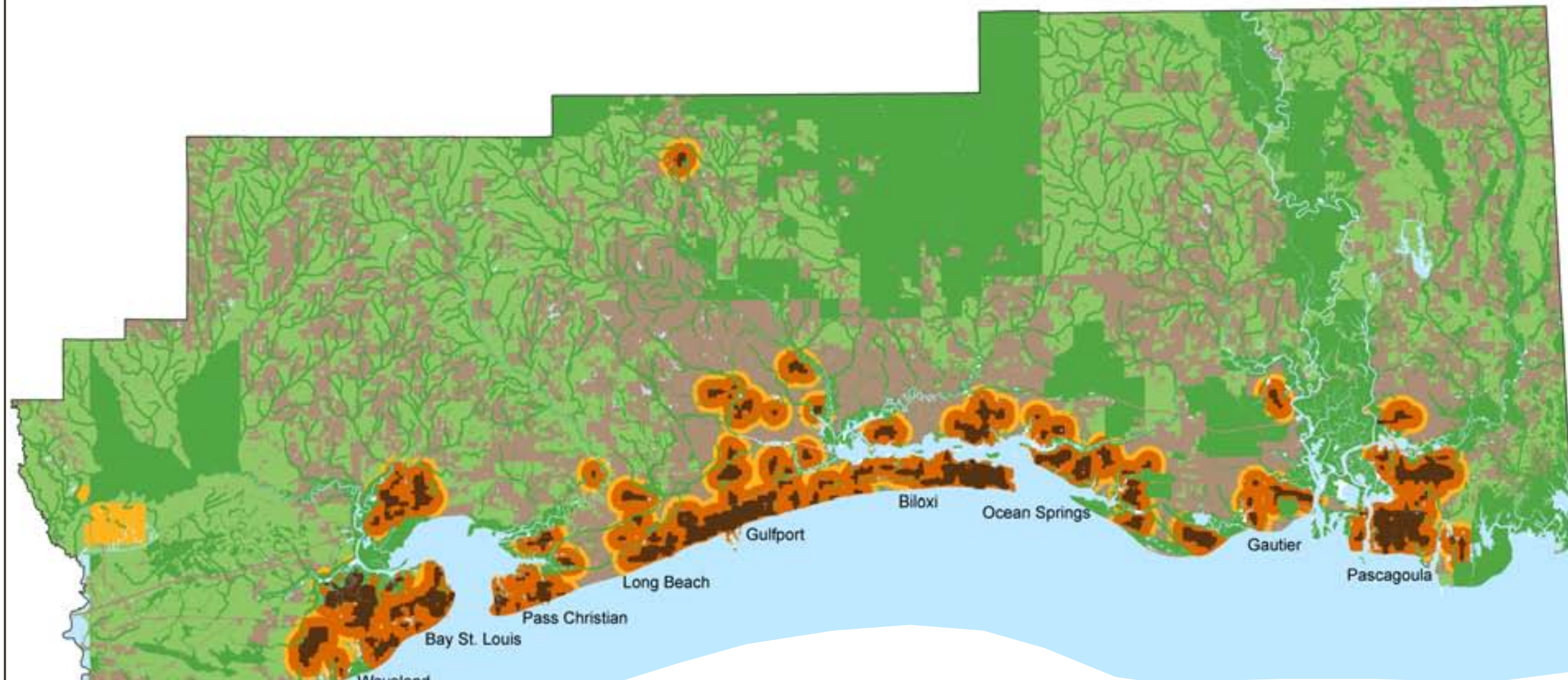
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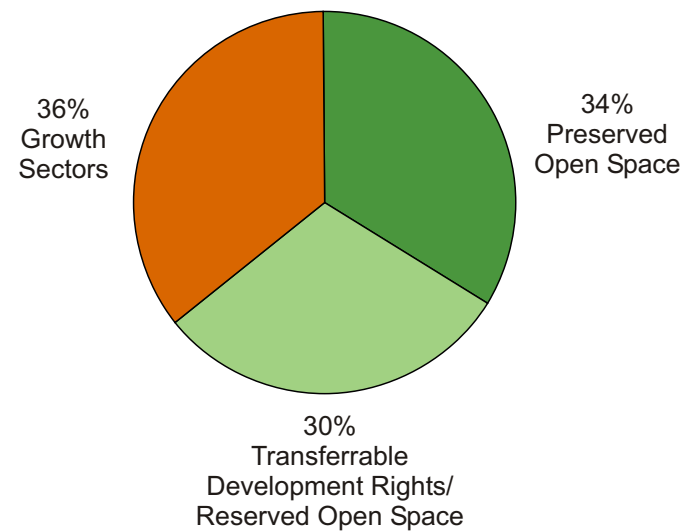
## NARRATIVE:

Assembling the sectors into a full composite provides a complete framework for regional growth visioning. Sector boundaries shown here are generalized subject to further ground-truthing, and do not include pending development projects.



- O1 Preserved Open Space
- O2 Reserved Open Space
- G1 Restricted Growth
- G2 Controlled Growth
- G3 Intended Growth
- G4 Infill & Redevelopment

## Regional Land Allocation



## Recommended Actions

### Introduction

Hurricane Katrina destroyed thousands of homes and businesses along the Gulf Coast. The storm also tore up train lines, downed bridges, disrupted lives, separated families, brought many businesses to a standstill, and wrought widespread havoc throughout the region. The catastrophic aftermath of Hurricane Katrina has presented the communities of the Gulf, the State of Mississippi and the nation with a tremendous redevelopment challenge. To help meet that challenge, the Governor's Commission on Recovery, Rebuilding and Renewal convened the Mississippi Renewal Forum in mid-October, a one-week effort to help define a rebuilding strategy for Gulf Coast Communities. Although the primary emphasis of the Forum was to provide the plans and tools to help eleven coastal towns to re-emerge stronger than ever, the Forum also focused on developing a broad set of recommendations aimed at decisions that affect several communities or the entire Gulf Coast region and Regional Growth Transect. These regional recommendations are intended to support the town-specific charrettes and their proposals while also helping to achieve a more collaborative region sharing capacity, coordinating identify, strategy and investment. The recommendations include a series of key aims:

- Renewing the transportation network and offering additional connectivity, mobility and transportation choices in the region;
- Enhancing the entire region, highlighting development approaches that build the economic, environmental and social vitality of the region;
- Using natural systems to create regional environmental and recreational amenities and reduce future flood and hurricane damage;
- Using cleanup and restoration as opportunities to solve existing environmental problems;
- Conserve Natural Ecosystems
- Capitalize on Eco-Tourism Potential
- Creating safe and resilient coastal communities;
- Sustainable economic development and retail strategies;
- Using innovative land use, design, housing, and development approaches to create neighborhoods of choice and opportunity; and
- Devising state, regional and local governance, investment and coordination strategies that support the effective rebuilding and renewal of the Gulf Coast.

During the Mississippi Renewal Forum in early October and in many discussions since, there have been intense debates about how, where and when this redevelopment should occur: How should citizens and local governments rebuild the coastal towns and cities of Mississippi and the many flooded neighborhoods? How should housing be provided for the tens of thousands of displaced residents? And how do we design communities to be more resilient and less in harm's way, in order to lessen the impact of future disasters?

If the Mississippi Gulf Coast is to re-emerge as a unique and vibrant landscape and a model of economic strength, it must be based on an outstanding quality of life and a diversified economy of homes, businesses, tourism, gaming, retirement living and water-related industry. The character and design of rebuilt communities, housing, and new infrastructure, and the potentially strategic nature of state investments should be sensitive to these goals and enhance them when possible with the priority placed on rebuilding, restoring and enhancing well-loved and economically vital places.

#### RENEWING THE REGIONAL TRANSPORTATION NETWORK FOR ADDITIONAL CONNECTIVITY, MOBILITY AND TRANSPORTATION CHOICE

##### GULFPORT PORT RAIL IMPROVEMENT

**Proposal: Increase the freight traffic at the port (via track improvements on the N-S Kansas City Southern line).**

Opportunity: Could increase market share from other ports including the Port of New Orleans.

Issues: Potentially conflicts with improved pedestrian environment along the port and Hwy 90. Partially obviates the need to improve the road access. Conflicts potentially with the use of Hwy 90 as a scenic road.

Example: New Jersey is working to attract freight businesses to brownfields sites near their ports, which may reduce the need for long distance trucking of goods, increase rail usage, and create new unskilled and semiskilled jobs in proximity to urban populations with significant unemployment. See <http://cfpub.epa.gov/sgpdb/policy.cfm?policyid=744>.

Timing: Short Term

Implementation Type: Design and Policy

##### COASTAL BIKEWAY

**Proposal: Create a Gulf Coast Bikeway that runs south of Hwy 90 for 90 miles along the coast from Pascagoula to Waveland.**

Opportunity: Could significantly boost tourism along the coast, encourage more tourism spending, and encourage people to spend more time in the region.



## Recommended Actions *Continued*

Issues: Not all the coast has a beach or other direct access. Seawall and fill construction could be very expensive. Funds will also be needed for support facilities and improvements along the path. Some entity will need to take the lead in coordinating different jurisdictions and private parties. Alternatively, routing a bikeway along Hwy 90 could create some traffic conflicts.

Example: The Minuteman Bikeway in Massachusetts passes through the historic area where the American Revolution began in April 1775 and is a treasured regional resource, used by local residents and visitors from near and far.

Timing: Short Term

Implementation Type: Design and Policy

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### RE-INCARNATION OF HWY 90 AS A GULF COAST SCENIC HIGHWAY

**Proposal: Redesign Hwy 90 as a scenic highway, with new medians, restricted development to the south, design guidelines and traffic calming.**

Opportunity: Could ease traffic congestion and add a scenic amenity, attractive to both locals and tourists.

Issues: May conflict with existing or planned development for south of the highway.

Example: Several scenic coastal highways, such as A1A in Florida and 101 in California, are major tourism draws. San Francisco's Embarcadero shows how in a very urban setting, replacing an elevated freeway with a surface boulevard, including transit, can dramatically increase property values and use by the public. A more matched example, the reconstruction of Dixie Highway and Olive Avenue in West Palm Beach, Florida, has helped this waterfront city revitalize itself over the past five years. See <http://www.arlingtonva.us/departments/Commissions/tc/study/images/2 State of ATM Practice.pdf> for a description.

Timing: Short Term

Implementation Type: Design and Policy

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### STREET CAR CIRCULATION SYSTEM

**Proposal: Create town-based streetcar loop systems that connect beach promenades to light rail.**

Opportunity: Could introduce a highly attractive transportation and recreational amenity, appealing to both locals and tourists. Could add critical vitality and added retail viability to towns by improving circulation and foot traffic.

Issues: Would only be viable initially in the largest population centers with the most tourists. May "compete" with light rail. May conflict with existing or planned development for south of the highway.

Example: San Diego is one of the many cities around the country with a popular trolley system that serves tourist destinations and employment centers and connects to other public transit services such as light rail and bus.

Timing: Short Term

Implementation Type: Design and Policy.

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### CREATE "MDOT" WATCH

**Proposal: Create centralized tracking system for MDOT projects conceived, planned, designed, contracted for and under construction to ensure that mutual goals are met.**

Opportunity: Billions of dollars are in the transportation pipeline in projects that could either support or undermine the plans for the region and the individual towns.

Issues: MDOT is an independent entity with separately elected commissioners local access to state transportation plans is very limited. Unclear that alignment of goals is a mutually desirable objective.

Timing: Short Term

Implementation Type: Management

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### INTERCITY RAIL NETWORK

**Proposal: Build a world-class intercity rail network for both freight and passenger traffic.**

Opportunity: CSX has an interest in building their capacity to support east-west freight traffic and provide more efficient linkages to New Orleans and Baton Rouge to the west, Meridian and Jackson to the north and Mobile and Pensacola to the east. A doubling of return on this substantial investment could be achieved if the right-of-way also includes high-speed passenger rail service that links to airports and major cities. This suggestion for improved freight and passenger rail service has the potential to substantially bolster the economy and vitality of the Southern states, as well as provide a secure evacuation route.

## Recommended Actions *Continued*

Issues: New right-of-way must to successfully acquired north of I-10 to accommodate this proposal. The CSX service would need to be realigned to this route, with a rail spur for freight and passenger service along the existing right of way next to Highway 49. Connections through Louisiana and Alabama would need to be negotiated. Costs for high-speed passenger rail tracks and cars would need to be identified and funds secured. Unless access is limited, the service may not function as envisioned.

Timing: Short and Mid-Term Efforts to secure right-of way through Mississippi should be undertaken immediately, along with Memoranda of Understanding with adjacent states regarding connection points and types of service. A funding source for passenger service should also be secured. Desirability of a Tri-State Intercity Rail Commission should be explored.

Implementation Types: Design and Policy

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### SEEK COST SAVINGS IN PLANNED REGIONAL TRANSPORTATION NETWORK

**Proposal: Revise several planned high cost road and bridge projects to better fit with the region's long-term goal to increase walkability and reinforce the vitality of existing town centers.**

Opportunity: MDOT has plans to build two projects that are likely to conflict with the community's goals for creating a more walkable network and reinforce the economies of existing towns.

Truck route to I-40 from Gulfport  
Widen bridge to Ocean Springs

There is an opportunity now, as these communities are rebuilding, to revamp these projects so that rather than creating costly physical dividers, streets and bridges fit with long-term local desires.

Issues: Under the pressure to rebuild, it will be very important to open lines of communication and quickly evaluate these revisions before substantial funds are expended.

Timing: Short term

Implementation Type: Policy

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### REBUILD MAJOR ROADWAYS WITH DESIGNS THAT COMPLEMENT THE REGION'S LONG-TERM VISION

**Proposal:**  
**Realign Highway 90 over bridge Biloxi Bay to be adjacent to the railroad bridge.**  
**Bring I-110 down to grade and integrate with a development strategy**  
**(\$15-20m to remove but value create would far surpass that**

Opportunity: Opens up land for development, helps calm traffic in towns, shifts private movement of traffic from Beach Boulevard to Division Street. Also helps simplify travel patterns and improve connectivity in Ocean Springs.

Issues: While costs for realignments could total roughly \$50M, it is likely that this could be offset by increased real estate value.

Timing: Short-term (design strategy for Biloxi Bay bridge and connection to Ocean Springs), Mid-term (construction of Biloxi Bay bridge), Long Term (changes to I-10)

Implementation Type: Design and Policy

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### ADOPT NEW STREET STANDARDS

**Proposal: Embed the vision of a more connected and walkable Gulf Coast in the street design standards.**

Opportunity: The rebuilding process presents an opportunity to consider amendments to existing street standards or adoption of new street design standards that better accommodate a wider range of transportation modes and fit better with the community-building objectives of each town.

Issues: While street design and construction is under the purview of local communities, the templates and model street design standards provided by the charrette team could be adopted by each community individually.

Timing: Short

Implementation Type: Design

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### ESTABLISH SECURE SOURCE OF CAPITAL AND OPERATING FUNDS FOR TRANSIT

**Proposal: Amend State constitution to permit flexible use of state gas tax funds for transit and ferry improvements, as well as bike/pedestrian trails, air-rail connections, roads and highways. Seek a greater share of federal transit and enhancement funds.**

Opportunity: The long-term future of the gulf region depends on a more robust set of transportation choices. Funding for both the construction and operation of transit networks, ferry service, air-rail linkages and bike/walking trails will be both substantial and necessary.

Issues: Current methods of funding transportation in Mississippi strongly emphasize road and highway projects. Changing this approach and growing the pie will require building a political constituency at federal, state and local levels.

Timing: Mid-term and long term

Implementation Type: Policy



## Recommended Actions *Continued*

### DEVELOP PUBLIC/PRIVATE STRATEGY FOR FUNDING AND OPERATING STREETCAR NETWORKS

**Proposal:** Work with community leaders, property owners, major employers and the casinos to develop a diversified funding strategy for building and operating a network of streetcar lines.

**Opportunity:** Virtually every streetcar system in the U.S. built in the last decade has been the result of public/private partnerships. These partnerships help build community support for public investments, accrue value to nearby property owners, and ensure that major employers, such as the casinos, actively engage in the design, funding and management of the facility.

**Issues:** There are limited federal funds available for low-cost transit improvements, such as streetcars, through the Small Starts program. Thus, communities have had to develop diversified funding strategies that draw funds from a wide variety of sources, including assessment districts, bulk transit pass purchasing programs, parking revenues, advertising and naming rights, and endowments.

**Timing:** Short-term (develop funding strategy), Mid-term (execute funding strategy).

**Implementation Type:** Policy and Management

### SAFE ROUTES TO SCHOOL

**Proposal:** Designate some of the federal "Safe Routes to School Funding" to award to new schools that are sited and designed to promote walkability.

**Opportunity:** The recently enacted federal transportation law includes funding to improve walking and bicycling access to schools. Location and design decisions have tremendous influence on the ways students can get to school. By targeting "safe routes" money to schools that support walking and biking in their siting and design decisions, the state can increase student (and parent) transportation options and save money on future bus costs. Transportation enhancements money can also be used for the purpose.

**Issues:** Sites that provide for greatest walkability may be more expensive. Costs may be reduced by smaller land requirements or offset by the money gained through the safe routes program.

**Example:** California provides competitive grants to schools for infrastructure improvements see <http://www.dhs.ca.gov/routes2school/> No state has yet taken advantage of the new federal Safe Routes program as the US DOT has not yet implemented it since Congress enacted its enabling legislation as part of SAFETEA-LU in July 2005.

**Timing:** Short Term

**Implementation Type:** Policy/Management

### EMERGENCY EVACUATION AND CRITICAL FACILITIES

**Proposal:** Develop a series of "hardened emergency service locations" strategically along the Gulf Coast and an evacuation plan for the Coastal Counties that meets the needs of the current population, and adjusts over time as the Coast receives additional population and development.

**Opportunity:** Evacuation routes appear to have functioned effectively for the existing coastal population, but growth projections anticipate significant future development. The evacuation system must be continually updated to meet the changing demands of this population. Evacuation arrangements should avoid relying upon any single mode of evacuation instead favoring a diverse, redundant, and resilient system. For emergency service providers who must remain, hardened locations located outside of hazard areas should be prepared, again with resiliency and redundancy as key principles. In addition, as recommended elsewhere, regional communication systems should be unified to enable coordination, information exchange, and mutual aid.

**Issues:** There may be an inclination to size infrastructure for large-scale evacuation over a short time frame. This strategy can be both costly and have unintended consequences for the daily functioning of the community. Management strategies such as phased evacuation, and temporary lane reversals should be considered as alternatives.

**Timing:** Short Term

**Implementation Type:** Management

### USE NATURAL SYSTEMS TO CREATE REGIONAL ENVIRONMENTAL AND RECREATIONAL AMENITIES AND REDUCE FUTURE FLOOD AND HURRICANE DAMAGE

#### AVOIDING DAMAGE/CREATING AMENITIES

**Proposal:** Evaluate hurricane and other flood patterns and determine 1) which areas are subject to recent frequent flooding and are too costly or hazardous to rebuild on; and 2) what wetlands, barrier islands, and other natural features should be preserved/restored to create community amenities and mitigate harm from future hurricanes.

**Opportunity:** avoiding areas that are particularly vulnerable to flooding and bolstering natural systems as primary flooding defenses can significantly reduce future threats to people and property. Significant resources are available at this time through FEMA and other Agencies to help with this transition (see buy-out program recommendation). In cases where towns have flooded repeatedly, there are examples of entire towns (Valmeyer, IL) relocating and rebuilding on higher ground. For the Mississippi Gulf towns the challenge is likely at a smaller neighborhood scale. In areas where rebuilding does not occur, buffers and

## Recommended Actions *Continued*

Wetlands can be created and restored to provide a community amenity as well as additional protection for existing communities. For residents who choose to move, housing opportunities should be made available nearby so they can continue to be part of the same communities. Where large groups agree to move, whole blocks should be re-created so that the social connections can be maintained.

Issues: Residents and businesses may not want to re-locate and should not be forced to do so. However, neither should the taxpayers of the United States or Mississippi be asked to pay for repeated rebuilding in high hazard areas. Rather, individuals should be able to accept the responsibility for the risks--so long as they don't pose a danger to their neighbors in agreeing to accept this risk (e.g. in some instances during the Katrina flooding property broke free and caused significant damage and safety risks to surrounding residents).

Timing: Immediate

Implementation Type: Management/Policy

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### CONSERVE AND ENHANCE BARRIER ISLANDS AND ASSOCIATED WETLANDS

**Proposal: Adopt a policy to manage the sand migration process to prevent reduction of the barrier islands. Consider expanding the barrier islands and landward wetland areas to increase coastal protection.**

Opportunity: Dredged sand from the barrier island ship channels could be used to maintain the natural migration of sand and to prevent reduction and the loss of barrier islands. The barrier islands could be significantly expanded and wetlands established on their landward side to reduce the impacts of future storms.

Issues: The barrier islands are not fixed in size or location, but shift over time in response to storms, wind and wave action. In the process they fill the ship channels. When the sand is removed from the channels, it is not returned to the islands but used elsewhere.

Timing: Medium Term

Implementation: Policy

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### USE FEMA BUY-OUT FUNDS TO ASSIST IN COASTAL RESTORATION

**Proposal: Use FEMA relocation funds to voluntary relocate households out of harm's way and assemble land for wetlands and marsh restoration.**

Opportunity: There is more than \$1 billion available from FEMA for voluntary buy-outs. Several of the communities destroyed by Katrina were built on wetlands and sensitive riparian ecosystems. These wetlands improve water quality in the Gulf and are essential to species diversity. These areas are also highly susceptible to flooding. Work with ecologists, scientists, FEMA staff, municipal officials and residents can identify settled areas severely damaged as a result of Katrina that were built on wetlands or sensitive riparian ecosystems. Some of these areas might be candidates for ecosystem restoration. As municipalities and residents work together to relocate households out of harm's way, the region's ecologists, scientists and FEMA staff could help to design the process for restoring the land back to its natural condition including the restoration of native species and hydrologic functions.

Issues: Buyouts are voluntary so creating good incentives for action is key.

Timing: Medium Term

Implementation: Policy

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### AUGMENT THE FEMA BUYOUT PROGRAM TO GET MORE CONTIGUOUS PARCELS

**Proposal: Target individual parcels and groups of parcels in critical shoreline and flood areas (high hazard, environmentally valuable, future community park) for FEMA buyouts.**

Opportunity: There is more than \$1 billion available from FEMA for buy-outs. This money provides an opportunity to permanently remove people and property from harm's way, regain critical environmental and/or community amenities and create a buffer against future storms. FEMA funds can only provide pre-Katrina market value buy-outs. The State should consider adding incentive funds to facilitate buy-out of groups of strategic located properties (e.g., key waterfront access for the public, critical environmental resources).

Issues: Buyouts are voluntary so creating good incentives to encourage contiguous groups of multiple property owners is key.



Example: New Pattonsburg, MO, accepted a FEMA buy-out to rebuild on higher ground after the floods of 1993. The town rebuilt with a more pedestrian friendly and environmentally sustainable plan. See <http://freshstart.ncat.org/case/dpnewpat.htm>.

Timing: Short-term

Implementation Type: Policy

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#### RESTORE AND ENHANCE TREE COVER IN V-ZONES

**Proposal: Reestablish a continuous native species tree cover in less urbanized areas.**

Opportunity: Tree cover defines regional character, reduces storm water runoff, reduces ambient outdoor temperatures by 2 to 6 degrees F. (reducing air conditioning costs), and protects against storm damage. Establish programs and partnerships (American Forests, Arbor Day) to educate the public about the benefits of trees and to aggressively promote the planting and maintenance of new trees in less urbanized areas such as Smart Code zones T-2, 3 and 4. Trees and landscaping can tie together both the new open spaces created through buy-outs and the areas of raised buildings in FEMA v-zones.

Issues: New development regulations may not require this. Municipal and county governments have no funds for planting or maintenance programs.

Timing: Medium Term

Implementation: Policy

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#### USE BUY-OUT AREAS TO CREATE A NETWORK OF WETLANDS AND OPEN SPACE

**Proposal: Buy-out areas where human habitation cannot safely continue and transform these areas into a mix of wetlands treating storm water runoff from the inland and open spaces providing environmental amenities.**

Opportunity: As much of the once inhabited land along the coast now is unsafe according to FEMA maps, that land can be used for reconstructing wetlands for stormwater mitigation and native species habitat, creating more recreational facilities to promote active living, and planting trees, particularly oaks and pines, for wind protection.

Issues: Use of this land will likely be controversial, and the coastal land will be in particularly high demand.

Timing: Short term: create regional open space plan  
Medium/Long term: Construct open spaces

Implementation: Design

#### USE CLEANUP AND RESTORATION AS AN OPPORTUNITY TO SOLVE EXISTING ENVIRONMENTAL PROBLEMS

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#### USE LARGE DEBRIS TO ENHANCE FISH HABITATS

**Proposal: Create new artificial habitats for sport and commercial fish and shellfish.**

Opportunity: Involve ecologists, scientists, representatives of the fishing industries, and the Coast Guard to design and locate new marine habitats using the concrete slab debris resulting from Hurricane Katrina. Conflicts may arise with navigation and interruptions to the natural migration of the barrier islands. If successful this approach could save money in hauling away the concrete bridge spans rather than having to haul them to a landfill.

Issues: Need to develop a short term resting place, a plan identifying sites suitable for habitats, and get approvals.

Timing: Medium Term

Implementation: Policy

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#### DIVERT KATRINA DEBRIS FROM LANDFILLS

**Proposal: Direct the FEMA debris removal process to focus aggressively on opportunities to divert debris from the solid waste stream, and create a system to deal with source separation in future events.**

Opportunity: Katrina has generated approximately 35 million cubic yards of debris, exceeding the total capacity of all the landfills located in the three counties. If existing landfills are filled, new ones must be constructed at great financial and social expense, so it is greatly beneficial to pursue recycling and recovery options.

Landscape debris makes up approximately 55% or 19 million cubic yards of the debris, while construction and demolition waste makes up approximately 30% of the debris with recyclable metals making up 14% and household toxics making up 1%. Broken concrete and masonry, suitable for processing into structural fill, makes up approximately 5% or 1.8 million cubic yards of the debris.

The landscape debris is suitable for processing into mulch. FEMA has no known standards for sorting the construction and demolition waste, and thus we recommend that FEMA be directed to design a comprehensive approach to minimize landfill and maximize recycling through front-end source separation through incentives to landowners and hauling contractors to divert debris from the waste stream.

## Recommended Actions *Continued*

Concrete and masonry-based fill can be used both for raising grades and as structural fill as needed for construction. Opportunities to further sort the remaining 25% of undifferentiated construction and demolition waste need to be explored.

In preparation for future storm emergencies, a curbside debris sorting protocol should be established. It should be accompanied by incentives for sorting along with FEMA contracts to provide needed hauling and sorting services. FEMA could distribute a set of colored flags to homeowners that would be labeled by category to order to promote easy separation.

Issues: FEMA regulations do not require recycling or sorting of the structural fill out of the debris. The debris is being hauled into local landfills and will have to be reclaimed from there. Decentralized processing and sorting centers based on the economy of scale of the processing facility can be located as staging areas on the existing landfill sites. Given the volume of landscape waste, ideally this would occur in each neighborhood. Limited portions of the materials may contain asbestos, lead paint or toxic materials. Steps must be taken to address these.

Timing: Short term

Implementation: Management

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### RAISE GRADE USING FILL FROM KATRINA DEBRIS

**Proposal: Identify sites that could benefit by raising grades using Katrina fill, thus reducing or eliminating the need for imported fill and alleviating the strain on landfills.**

Opportunity: The amount of structural fill specified above could raise the grade on approximately 370 acres of land by 3' or 110 acres of land by 10'. The redevelopment teams need to be made aware of the possible availability of structural fill and mulch. This awareness could help create demand for the recycled fill and mulch.

Issues: FEMA needs to create the opportunity by redirecting its resources away from hauling and toward recycling. Solid waste managers need to communicate the amount of fill and terms for its use.

Timing: Short term

Implementation: Management

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### ESTABLISH EMERGENCY DEBRIS RECYCLING AND RECOVERY PLAN

**Proposal: FEMA and the coastal counties of Mississippi to establish a debris recycling and recovery plan for future storm emergencies.**

Opportunity: In preparation for future storm emergencies, a curbside debris sorting protocol should be established. It should be accompanied by incentives for sorting along with FEMA contracts to provide needed hauling and sorting services. FEMA could distribute a set of colored flags to homeowners that would be labeled by category to order to promote easy separation.

Issues: Making long term planning a priority will be hard for locals, but can and should be done by FEMA in conjunction with the Solid Waste Division of EPA.

Timing: Medium Term

Implementation: Management

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### IDENTIFY AND ENTITLE ADDITIONAL LANDFILLS

**Proposal: Revise current county solid waste plans to plan for and entitle landfills to serve a 75-year horizon.**

Opportunity: Even with extensive recycling the Katrina debris will consume a large proportion of current landfill capacity. Because landfill approvals can take many years, the three coastal counties are just one major storm event away from another more serious solid waste crisis.

Issues: Land needs to be set aside now, as it will only get harder to assemble.

Timing: Long term

Implementation: Design, Management

### ESTABLISH A NATIONAL REPUTATION AS A "SUSTAINABILITY ZONE"

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### SEAFOOD AND ECO-INDUSTRIAL PARK

**Proposal: Create an eco-industrial park to re-use solid waste, accommodate future landfill needs, combine three POTWs in one regional wastewater treatment facility, and house an inland seafood processing plant.**

Opportunity: Katrina damaged three POTWs, a seafood processing plant and damaged thousands of structures. Debris from Katrina will stress existing landfill capacity. The damaged POTW's outfall locations in the Bay (Biloxi?) Contribute



## Recommended Actions *Continued*

to Fecal Coli form pollution that leads to beach closures. The seafood facility is facing pressure from competing land uses (potential conversion to other uses), can be moved out of the path of future storms, and receives only a small portion of its seafood from boats on the bay (10%?) while the rest arrives by truck.

The waste stream from Katrina is volumetrically immense and likely represents hundreds of millions of dollars of material value particularly re-useable construction materials that will be in high demand during rebuilding. Viewing it as a waste product and transporting it to a landfill will miss the opportunity to exploit this immense material value. In addition, many of the industries that may benefit from this waste stream combine low skill physical labor with higher skill design, engineering and marketing staff. As industries such as the seafood processing plant are relocated, other businesses that may utilize their waste can be co-located. In general, the waste streams of the industries of the region and those of the municipalities can be inventoried and identified as potential raw materials for new industries.

Issues: Expensive to build new treatment plant and landfill and acquire sufficient land for buffer. Land application of sewage sludge may be problematic with water and soil conditions.

Timing: Mid-term

Implementation Type: Policy

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### ADOPT SUSTAINABLE PRACTICES FOR AGRICULTURAL USES

**Proposal: Establish a broad range of sustainable agricultural practices while increasing the connections for consumption of regional agricultural products with local markets. Additionally, locate wastewater treatment plants on inland sites adjacent to agricultural zones to simplify distribution of nutrient-rich sewage sludge onto adjacent growing areas.**

Opportunity: A number of practices for more sustainable agriculture can be adopted. These range from increased use of best management practices to reduce impacts on waterways to increasing the amount of organic crops while creating markets for those crops in farmers markets and restaurants in the coastal community. Modern tertiary sewage treatment plants can be very effective at removing pollutants from a wastewater stream. However, the solid sludge that results from the treatment process is often commingled with industrial and other inorganic wastes and disposed of in landfills. This sludge is a resource that can sustain an adjacent agriculture economy.

Issues: Land assembly, NIMBYs,

Timing: Long Term

Implementation: Policy

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### PURSUE SUSTAINABLE DEVELOPMENT WITH THIRD PARTY VERIFICATION: LEED-ND

**Proposal: Encourage the developments planned as part of the Governor's Renewal Forum charrette to pursue certification as model sustainable developments under the LEED-Neighborhood Development draft protocol.**

Opportunity: A New Urbanist development is virtually guaranteed to be walkable and compact. The Smart Code goes on to highlight where development should occur (T-3 Reserves) and where development conflicts are likely to occur (T-2). These tools are complemented by a larger sustainability agenda contained in the LEED-Neighborhood Development protocol. LEED-ND provides detailed guidance on where development should occur while embracing environmental stewardship and affordability.

The 11 design teams working on the coastal communities, along with several mayors and other elected officials, have been briefed on LEED-ND. Most of the teams have incorporated its principles to some degree, and it is likely that several of the redevelopment plans might certify at a high level. Pursued to full certification, this would bring national recognition to the sustainability agenda of the Governor's Renewal Forum.

Preliminary discussions were held with foundations about providing funding to support this enterprise.

Issues: Funding, local interest, design and developer interest.

Timing: Long Term

Implementation: Design

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### ADOPT BUILDING ENERGY EFFICIENCY STANDARDS

**Proposal: Adopt a statewide building energy efficiency code for new construction and major renovations in the State of Mississippi. Particular attention should be paid to building affordable housing at the same standards.**

Opportunity: Energy efficiency codes have been shown to reduce the number of dollars leaving a state's economy and can contribute to the economic competitiveness of a region or state. Energy efficiency codes also lower the burden on ratepayers who have to bear the cost of building new power plants through increased rates and higher bills. (Mississippi Power currently plans to build a new plant in 2011 to meet anticipated energy needs.)

Approximately 38 out of 50 states (Mississippi is not one of them) have adopted a version of the International Energy Conservation Code (IECC) as part of their state building codes. Compliance with the IECC is the rule rather than the exception. This is especially true for businesses or developers working in multiple states.

## Recommended Actions *Continued*

ASHRAE 90.1, the energy efficiency standard referenced in the IECC, is already required by some municipalities in Mississippi and possibly statewide for commercial buildings in Mississippi. For this reason the adoption of IECC would represent an incremental change. The adoption of an energy efficiency code would save the citizens and businesses of Mississippi hundreds of millions of dollars over the decades to come.

Issues: Adopting codes goes against anti-regulatory culture in Mississippi. Multi-state businesses may view it as good for business by reducing the number of standards they have to comply with. Perception that it will increase costs of building. Need to articulate benefits.

Timing: Short Term

Implementation: Policy

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### PROMOTE RESIDENTIAL ENERGY EFFICIENCY

**Proposal: Create incentives for residential customers to build more energy efficient homes and install energy efficient lighting and equipment.**

Opportunity: Residents of southern Mississippi have enjoyed relatively low electrical rates but pay relatively high bills because of the energy demands of air conditioning and energy inefficient building practices. This issue is especially acute for the very high percentage of low-income residents who pay a disproportionately high amount of their income for energy.

The best time to introduce energy efficiency upgrades is during the construction of a new building or a major renovation. The widespread building and renovation resulting from Katrina offers a once-in-a-generation opportunity to introduce major efficiency upgrades. As a rule of thumb, upgrading the design of a house to achieve Energy Star (about 30% better efficiency than code) adds a few percent say \$2000 to 4000 to the cost of a new house. This investment usually pays itself back in five to seven years. The costs of introducing energy-efficiency upgrades in renovation are somewhat more variable.

Some homeowners will struggle to rebuild at all, having been caught with no or inadequate insurance. Still other residents with the means to pay the cost of the energy upgrades will miss the opportunity and rebuild conventionally. Energy efficiency incentives currently offered by Mississippi Power are weak, are promoted minimally, are used by less than 1% of customers, and can be considered ineffective.

In order to allow as many of the 30,000 to 50,000 Mississippi homeowners rebuilding from Katrina to take advantage of this opportunity, a new comprehensive incentive strategy needs to be developed. This might include a public private partnership between Mississippi Power, mortgage lenders, and the state of Mississippi or the three coastal counties to offer pre-approved financing combined with tax incentives at the time of design/finance and construction.

Issues: Energy efficiency upgrade paths are not clear to homeowners, builders or architects. Additional first cost of construction a major barrier at time of reconstruction. Incentives need to be accepted as normal practice by mortgage, builders and permitting agencies to be adopted on a widespread basis.

Timing: Medium Term

Implementation: Policy

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### PROMOTE ENERGY EFFICIENCY IN AFFORDABLE HOUSING

**Proposal: Take advantage of funding opportunities to promote energy efficiency in affordable housing.**

Opportunity: The Enterprise Foundation, amongst others, offers Green Community grants, targeted at providing funding to make affordable housing more affordable.

Timing: Short Term

Implementation: Policy

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### PROMOTE COMMERCIAL ENERGY EFFICIENCY AND DISTRIBUTED GENERATION

**Proposal: Create incentives for commercial customers to build more energy efficient buildings and install energy efficient lighting and equipment.**

Opportunity: Create funding opportunities to pay any increased costs associated with greater efficiency. Create tax incentives. Because this construction directly benefits the commercial owners' bottom line, much of the goal can be achieved by educating owners and their builders regarding the availability of equipment and the techniques of construction.

Issues: There may be local resistance to requirements for energy efficiency. Distributed Generation is much harder to coordinate.

Timing: Energy Efficiency: Short Term  
Distributed Generation: Long Term

Implementation: Policy

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### ADOPT BUILDING WATER EFFICIENCY STANDARDS

**Proposal: Adopt a water efficiency code for new construction and major renovations in the three coastal counties of Mississippi.**

Opportunity: Poor coastal water quality leading to periodic beach closings is a threat to the economy of Mississippi's coastal counties. Much of the problem can be traced to the wastewater plants that discharge directly into the Gulf.



## Recommended Actions *Continued*

Reducing the volume of wastewater that each existing plant has to treat can improve the quality of the plant's discharge water while extending the useful life of the existing facility. Deferring the need to build new sewage infrastructure reduces costs to rate paying consumers.

New water conserving technologies make it possible to achieve water efficiency without sacrificing comfort or amenity. Dual flush toilets allow the user to specify a greater or lesser amount of flush water based on the nature of the waste. This results in a water savings of approximately 25% as compared to conventional toilets. Waterless urinals can save up to 45,000 gallons per year each and are less costly to install, reduce odors and are more hygienic than conventional "flush" urinals.

The benefits of setting standards to encourage or require these new technologies include decreased demands on water supplies, increased quality of treated water and reduced infrastructure costs.

Issues: There is often the perception that performance will suffer with water saving technologies, though with most new technologies, this is not the case. The lingering assumption may be a major barrier to the adoption of water efficiency standards.

Timing: Short Term

Implementation: Policy

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### **DEVELOP GREEN BUILDING DEMONSTRATION PROJECTS IN EACH TOWN**

**Proposal: Identify one building project in each of the 11 municipalities to design and develop as a certified green building.**

Opportunity: Over the next 10 to 20 years, tens of thousands of buildings are likely to be built in the three coastal counties of Mississippi. This rebuilding offers an opportunity to develop south Mississippi into a center for innovation in green building and sustainable development. One of the best ways to accelerate innovation and build experience in the building industry is to develop demonstration green buildings.

Over the last 10 years, the concept of green buildings has begun to change real estate and development practice. Compared to a conventional approach, green buildings can consume 30-40% less electricity than conventional buildings, are healthier for occupants, have been shown to increase retail sales and improve student test scores, and have greater real estate value. Experienced design and contracting teams can deliver these manifold benefits for little additional cost.

Resources are available to create incentives to develop green buildings. Foundation support is available to fund the marginal cost of planning green buildings from Kresge and Enterprise. Technical Assistance in the form of energy modeling is likely available from the National Renewable Energy Labs in Golden, CO or the Lawrence Berkeley Labs in Berkeley. The Department of Energy also has programs to encourage energy efficient housing and buildings.

Issues: There is a need to identify specific projects and motivated teams and link them with resources. It will not work if these projects are imposed on towns, architects, or contractors who are not interested in learning a better way to do things. This policy needs to be thought of as an economic development strategy.

Timing: Long Term

Implementation: Design

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### **BUILD GREEN SCHOOLS AND GOVERNMENT BUILDINGS**

**Proposal: Require schools and public buildings to adopt green building practices.**

Opportunity: Because of the potential to spend taxpayer dollars more effectively, schools and government buildings are worthy building types to build green. Student test scores have been shown to increase by up to 20% (research available at [www.h-m-g.com/](http://www.h-m-g.com/) - 12k) in school buildings that employ daylighting. Worker productivity as measured by absenteeism, job satisfaction, loyalty and the like have been shown to go increase in green buildings. Increasing the productivity of municipal employees is good policy.

This opportunity is different from the green building pilot suggested above in that this recommends that public buildings be required to build green. It makes sense to adopt this requirement only after a pilot phase confirms the benefits and viability of green buildings in general.

Issues: It is essential to start with pilot buildings. In addition, there are always general barriers to doing things differently.

Timing: Long Term

Implementation: Policy/Design

## Recommended Actions *Continued*

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### ESTABLISH COASTAL ZONE BUILDING RESEARCH AND POLICY CENTER

**Proposal: Establish a building research institute to research and disseminate high performance building techniques suited to the Mississippi coast.**

Opportunity: Building construction will be a leading industry in south Mississippi for years to come. However, despite a tradition of vernacular architecture thought to be suited to the coastal climate, Hurricane Katrina proved that some traditional construction techniques are ill-suited to the humidity, temperature and storm conditions buildings are subjected to in south Mississippi.

Building science can inform how to improve the energy and comfort performance of traditional buildings, to allow them to survive storms and keep their occupants comfortable for the least cost. Such innovations in building design will create long-term value for building owners by creating long lasting structures that are inexpensive to operate and maintain.

Financing for such a research facility may be made possible by support from the local power and gas utilities.

Issues: No institution of this type exists in Mississippi, though there are some design and research facilities in Jackson.

Timing: Long Term

Implementation: Design

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### COORDINATE REGIONAL LOGISTICS FOR INCREASED EFFICIENCY

**Proposal: Establish a regional logistics center to coordinate an increase in efficiency and the reduction of costs for shipping and procurement within the region.**

Opportunity: Every place competes these days. In order to lower costs for all businesses within the region as well as the municipalities this center would aggregate the shipping and procurement needs of these entities to obtain greater efficiencies and lower prices. This is a concept already utilized in the eco-industrial and logistics industries. The increased ability to negotiate discounts and completely use transportation opportunities will result in a more competitive region, spending less of its available funds on logistics. It will also significantly reduce energy related costs. Coordination of important resource related services such as recycling and yard waste composting will also reduce costs and create opportunities for better markets for resulting products.

Issues: Localities and businesses must work together. Some coordinating agency is necessary to explore opportunities.

Timing: Medium Term

Implementation: Management

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### INSTITUTE GREEN BUYING PROGRAMS

**Proposal: Have all local government-run entities institute a green buying program where they purchase recycled and otherwise more sustainable materials.**

Opportunity: From police car purchases to cubical replacement to paper supplies the local governments can signal the nature of the region by including sustainability as one of their criteria in purchases.

Issues: Need materials to help them easily identify and compare green products.

Timing: Short Term

Implementation: Management

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### ESTABLISH RECYCLING PROGRAM

**Proposal: Establish residential and commercial recycling programs for standard and toxic waste.**

Opportunity: Landfills are hard to site and permit and can depress property values on adjacent land. Recycling programs can reduce waste generation, landfill demands and create new economic opportunities. Source separation including toxic waste separation, at or near the point where waste is generated, is essential to creating markets for material use. Source separation may include curbside sorting for residential customers and requirements for separate dumpsters and on-site storage for commercial customers.

Composting should be encouraged to reduce or eliminate the introduction of garden, landscape and appropriate household organics into the waste stream. Toxic household waste recycling needs to be made easy for homeowners to take advantage of. This may take the form of frequent drop off days or decentralized drop off points for toxic wastes. There is an opportunity to teach the benefits of a recycling program through the schools.

A detailed study is needed to determine how best to increase recycling and to decrease the volume of waste being hauled to landfills. It is likely to involve a pricing structure that reflects the fuller cost of landfills thereby rewarding recycling and waste diversion.

Issues: On a short-term basis it is lower in cost to haul waste to a landfill. Landfill tipping fees are very low and create no incentive for recycling. People dislike the hassle they associate with recycling. Everyday habits are hard things to change when people don't see an immediate threat or crisis to propel the change.

Timing: Short Term

Implementation: Management



**ENVIRONMENTAL JUSTICE**

**ENSURE THAT THE REGION EXEMPLIFIES THE PRINCIPLES OF ENVIRONMENTAL JUSTICE**

**Proposal: Maintain strong lines of communication between state, county and local government and low-income and minority communities to assure that those communities do not shoulder a disproportionate burden in the ultimate location of debris landfills, new industries or decisions regarding the availability of buy-out programs.**

Opportunity: Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. In order to assure that low income and minority communities are not asked to bear a disproportionate share of environmental problems.

Timing: Short Term

Implementation: Policy

**BECOME A REGIONAL CENTER FOR ECO-TOURISM**

**FOUND AN ECO-TOURISM TRAINING AND COORDINATION CENTER**

**Proposal: Establish an eco-tourism training and coordination center that organizes guides, hotels, restaurants and others around the eco-tourism theme.**

Opportunity: Through affiliation with a college or university located in the region, establish a program that would provide international training in industries related to eco-tourism. As the program is created, guides would be trained in the region, concessionaires such as kayak, canoe or bike rentals would be incubated and programs for restaurants and hotels would be developed. Regional marketing campaigns and an eco-tourism code of ethics will be generated. The training facility would coordinate the regional eco-tourism activities. As people come to the courses, they will interact and intern in the surrounding businesses. This program can be integrated into the cultural tourism, agro-tourism and regional sport fishing programs.

Issues: It will take a few years to build up the program.

Timing: Medium Term

Implementation: Management

**PROVIDE FINANCING FOR ECO-TOURISM STARTUPS**

**Proposal: Create financing for eco-tourism startups (related to the proposed coastal bikeway, for instance) and convenient support facilities for seasonal operations.**

Opportunity: Although the capital thresholds are low for many eco-tourism startups, market entry could be stimulated with a relatively small amount of loan money. Management assistance should be provided as well. Moreover, assistance in supporting seasonal operations by providing inexpensive storage and easy licensing would be helpful.

Issues: Sources of funds unclear economic development?

Timing: Medium Term

Implementation: Time Management

**ESTABLISH A NETWORK OF NEIGHBORHOOD PARKS**

**Proposal: Assess which urbanized areas are most deficient in parks and identify specific sites for new parks. Integrate new parks into the coastal trail system and the regional network of open space.**

Opportunity: A map of the coastal counties seems to confirm that the most urbanized areas of the Mississippi coast are underserved by parks. In several urbanized areas, it appears that parks are located as far as two or three miles apart, far from a reasonable walking distance. The ideal is to have a public square, plaza or green within a three-minute walk of most houses, shops and workplaces. Another ideal is to bike or jogging trails or park sites for sports and active pursuits no further than a 10 minute walk from most houses, shops and workplaces. The displacement caused by Katrina has created a once in a generation opportunity to retrofit new parks into each community. Innovative maintenance and management procedures can strengthen community ties and reduce maintenance costs.

Mississippi has high rates of obesity, heart disease, stroke, some cancers, and diabetes. Caring for people with these diseases takes up the bulk of the growing health care budget for both public and private sectors." Creating walkable communities and promoting active living can begin to address this alarming public health trend. Walk-to neighborhood parks are an essential part of sustainable communities, and an important strategy to encouraging "active living".

Issues: Land and funding may be scarce in coastal areas. Planning may not be detailed enough to identify opportunity sites.

Timing: Long Term

Implementation: Design

## Recommended Actions *Continued*

### DEVELOP "WATCHABLE WILDLIFE" PROGRAM

**Proposal: Develop a "watchable wildlife" program centered on the cranes but including other regional wildlife. Coordinate new regional landscaping efforts to benefit wildlife. Institute wildlife refuges or reserves.**

Opportunity: Birding and wildlife watching has significantly expanded as destination recreation. As the population matures, this market is expected to grow. By creating access that does not disrupt the cranes and creating a landscape along the shore that benefits wildlife, the region can stimulate a "watchable wildlife" program. Such a program will attract tourists and increase home values with retirees.

Issues:

Timing: Medium Term

Implementation: Management

### OTHER ENVIRONMENTAL PROTECTION

#### ENHANCE WATER QUALITY THROUGH INTEGRATED STORMWATER FILTRATION

**Proposal: Introduce storm water best management practices to infiltrate stormwater into the ground and to prevent runoff from reaching surface water bodies and the Gulf.**

Opportunity: The first flush of water resulting from a storm contains highly concentrated pollutants. Best practices appropriate to their context such as porous paving bioswales, rain gardens, and stormwater treatment facilities can prevent these air pollutants from reaching the water.

Issues: New approach to infrastructure, a very conservative domain. Cost, land area, design.

Timing: Medium term

Implementation: Design

#### IMPROVE WASTEWATER TREATMENT: ADDRESS THE SEPTIC SYSTEMS CRISIS

**Proposal: Improve wastewater treatment in unsewered areas of the coastal counties and municipalities by creating a (or several) septic management district funded through a combination of user fees and initial developer wastewater treatment charges.**

Opportunity: Development patterns and building practices are profoundly affected by the manner in which wastewater from development is treated. For

instance, on the Mississippi Gulf Coast, heavy reliance on septic systems has had several influences. First, because of poor soil conditions, areas without sewer systems typically require large lots keeping densities low and development highly dispersed. Second, because septic systems frequently fail and efforts to insure continual maintenance and proper operation (inspection, enforcement, performance bonds, creation of management districts with sustained funding, etc.) are largely absent development in these areas is artificially cheap compared to areas with sewer facilities. Third, failing septic systems (and package plants) impair development of natural resource based industries. Finally, familiarity with septic systems as a solution for unsewered development may lead regulators and developers to disregard other options such as land application or package plants. These have the potential to enable other forms of development that adhere to more traditional neighborhood design principles enabling the development of hamlets and villages in unsewered areas.

The current system of managing wastewater in un-sewered parts of the Mississippi Gulf Coast is not adequately protecting Mississippi's resources, nor is it facilitating good development. Creating a septic management district can reduce health threats to drinking water, protect fisheries, reduce the financial burden on coastal residents, and support the development of traditional neighborhood design in the unsewered portions of municipalities and the counties.

Issues: Development costs may rise as developers assume more responsibility for the proper functioning of their projects. Adequate land areas must be found for land application of wastewater-- making sure to avoid wetlands.

Timing: Mid Term

Implementation Type: Policy, Design, and Management.

#### STORMWATER UTILITY

**Proposal: Create a regional utility to manage stormwater runoff and incentivize location, lot size, and paving choices that minimize runoff.**

Opportunity: Stormwater utilities manage stormwater at a regional scale and are supported by fees charged to users. Funds are used to treat stormwater or for projects to mitigate stormwater runoff. The creation of such a utility provides the opportunity to manage stormwater at multiple levels on site, at the neighborhood level, or at the regional utility level. Thus, on site detention and infiltration techniques can be used where appropriate. For more urban settings, a stormwater park, or water feature servicing several developments may be created. In the most urban settings, all stormwater can be treated off-site. This flexibility allows all modes of development. Additionally, the fee structure can be calibrated to match impacts. For instance, a charge based on the change in site run-off from before to after development would demonstrate the stormwater benefits of re-using impervious surfaces since no increase would be anticipated. In addition, such a system would allow developers to reap the rewards of higher densities because as densities rise, run-off per unit generally drops. A charge based on number of units would be inappropriate.



## Recommended Actions *Continued*

Issues: Calculating fees can be controversial.

Example: The Center for Urban Policy and the Environment at Indiana-Purdue University Indianapolis has extensive information on how to create and manage stormwater utilities. Details are available at: <stormwaterfinance.urbancenter.iupui.edu>.

Timing: Intermediate

Implementation Type: Management

### STORMWATER MANAGEMENT: MERGE GROWTH AND STORMWATER PLANNING

**Proposal: Use the on-going development of municipal permitting under The National Pollution Discharge Elimination System (NPDES) to coordinate stormwater management and growth/rebuilding.**

Opportunity: Mississippi's general NPDES permit for stormwater offers opportunities to develop joint stormwater and growth plans, in particular for the post-construction minimum measure. In addition, the state has the ability to designate additional areas not automatically covered under the permit, and thus the state could bring the entire Gulf region under the permitting umbrella. These efforts should also seek opportunities for "load reductions" within on-going efforts to develop and implement limits for Total Maximum Daily Load requirements (TMDLs). Finally, Mississippi's guidance for complying with stormwater permits is still in draft form, so there may be opportunity to fine tune language

Issues: There are several agencies overseeing natural resource management and water quality. The Mississippi Department of Environmental Quality is responsible for overseeing NPDES stormwater permitting. However, other departments have additional permitting responsibilities (e.g., wetlands) and there is a well-developed natural resource mapping unit (the Coastal Resources Mapping Unit) that includes many smart growth aspects for future land development and resource protection.

Example: Links to the state's stormwater permit, TMDL program and coastal programs can be accessed from [http://www.stormwaterauthority.org/regulatory\\_data/state.aspx?id=145](http://www.stormwaterauthority.org/regulatory_data/state.aspx?id=145)

Language from general permit -

(3) Any non-structural Best Management Practices (BMPs) in the program, including, as appropriate:

(a) Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for

open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation and encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure.

(b) Education programs for developers and the public about project designs that minimize water quality impacts.

(c) Measures such as minimization of the percentage of impervious area after development, and minimization of directly connected impervious areas.

Timing: Short Term

Implementation Type: Design and Policy, Management

### SUSTAINABLE ECONOMIC DEVELOPMENT AND RETAIL STRATEGIES

#### RETAIL STRATEGY

**Proposal: Pursue a regional coastal strategy for retail by:**

- **Accommodating Neighborhood Services and Artists Galleries and Studios,**
- **Locating Community Retail, Gifts/Home/Lifestyle, Neighborhood Services, Art Studios, and Restaurants in Bay St. Louis**
- **Siting Neighborhood Services, Gifts, Restaurants, and Community Services in Pass Christian,**
- **Locating Neighborhood Services in Long Beach.**
- **Making Gulfport the Super Regional Retail center and Lifestyle center in the region, moving the retail that was destroyed along I10 to Gulfport's downtown.**
- **Making Biloxi the Lifestyle and Super-neighborhood and Tourist Entertainment Center.**
- **Siting Community Retail in D'Iberville**
- **Focusing on Restaurants, Gifts, and Community Retail in Ocean Springs,**
- **Targeting Neighborhood Services in Gautier,**
- **Providing for Neighborhood Services, and Restaurants in Pascagoula**
- **Focusing on Neighborhood Services and Community Retail in Moss Point**

Opportunity: There is an opportunity to retain the vitality and viability of the existing neighborhoods, towns, and tourist base by pursuing a regional retail strategy among the coastal towns. If the regional demand for retail is not met in Gulfport, but is instead met on the interstate exchange, development plans, and

## Recommended Actions *Continued*

the existing vitality of the cities may be undermined. Interstate oriented retail will, without extraordinary efforts, be auto- oriented, single use, and may draw development into areas without the road or water and sewer infrastructure needed to accommodate this development.

Issues: These actions need to be taken expeditiously to be effective. Incentives may be needed to facilitate this development pattern.

Timing: Short-term and Medium Term

Implementation Type: Policy

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### TARGET ECONOMIC DEVELOPMENT INCENTIVES

**Proposal: Identify “growth centers” where local government will use taxpayer money to support more urban development. Direct Urban Economic Development Incentives to growth centers and Rural Economic Development Incentives to areas outside of growth centers.**

Opportunity: Creating synergies between public investments can maximize Returns on taxpayer dollars, and fostering private investment with clearly stated public intentions. Supporting the development of tourism, gaming, government contract related industry and other forms of urban development in growth centers maximizes synergies between these and other industries and avoids breaking the geographic continuity often needed for successful agricultural and other working lands. Maintaining rural industries such as agriculture and silviculture can also be a smart fiscal strategy as these industries generally are net tax generators whereas residential development is often a net fiscal drain.

Issues: Counties will still receive commercial, residential, and industrial development and limiting the tools and incentives available in the county to improve that growth may hamper the county's ability to improve proposed projects.

Timing: Immediate Implementation Type: Policy

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### INLAND PORT

**Proposal: Establish an inland port-- possibly at the intersection of the rail link and Interstate 10, the intersection of the new CSX east/west alignment, or in Saucier.**

Opportunity: The port and its facilities incurred significant damage during the most recent storm, and caused significant destruction in surrounding areas. In addition, the facility's size and the capacity to and desirability of accommodating significant increases in truck traffic may limit the ability of the port to increase its freight traffic. With the recommended improvements in the port's rail link and engineering solutions for train/traffic interactions within Gulfport, the rail link could take containers directly off ships and deliver them to

an inland staging facility for east/west train and truck distribution. This would reduce truck delays and traffic in the port area, protect port equipment from future storm damage as well as limit potential liability associated with port equipment damaging adjacent structures during storms.

Issues: Engineering solutions to resolve train/traffic interactions in Gulfport will be challenging.

Timing: Mid Term

Implementation Type: Policy/Design/Management

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### RESOURCE BASED DEVELOPMENT

**Proposal: Support natural resource based economic development.**

Opportunity: Silviculture, agriculture, eco-tourism, sport-fishing and commercial fishing, and other natural resource based sectors of the economy are an important part of the regional economy, and usually are fiscally positive activities for local governments. To create a diversified, resilient economic base, development of other economic sectors (such as government contracting, casino-based tourism, construction and development) should proceed in tandem with the natural resource based economy rather than at its expense. Keys to accomplishing this goal are maintaining the economic viability of the natural resource based sector and ensuring that these industries are not significantly fragmented geographically-- fragmentation can limit economies of scale and create inter-sector land use conflicts. The economic viability of these industries can be supported by catalyzing the development of value-added operations on-site, as well as by helping operators to identify higher value products and markets (e.g. organics). Fragmentation can be avoided by focusing development in previously developed areas, and when new development occurs in outlying areas, by focusing that development in villages and hamlets.

Issues: Development opportunities for individual property owners may be more profitable than maintaining existing uses. When these opportunities are realized by the individual owner, fragmentation can occur and jeopardize others financial viability. Transferable development rights, enhanced economic returns on existing uses, and outright purchase of development rights offer viable means for achieving gains without converting key parcels.

Timing: Mid-Term

Implementation Type: Policy



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### INCENTIVES FOR INFILL/REDEVELOPMENT

**Proposal: Provide utility-based incentives for infill development and redevelopment of previously developed locations.**

Opportunity: Infill development and redevelopment of previously developed areas are usually less expensive to provide with water and sewer, power, and other linear utilities. Localities and states have begun to recognize and encourage these efficiencies by granting hook up rebates or waiving fees entirely for infill and redevelopment.

Issues: Clearly defining the types of development projects that qualify for rebates and waivers is critical to creating an effective incentive system.

Timing: Near Term

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### REDEVELOPMENT AUTHORITY

**Proposal: Create a redevelopment authority for each town.**

Opportunity: Create a redevelopment authority to encourage, direct, and regulate new development and redevelopment within specified districts.

Issues: Redevelopment along the Gulf coast will occur through a combination of market forces and governmental assistance. A redevelopment authority can assist in those areas where incentives and assistance are necessary to move projects forward. Depending on its powers, a redevelopment authority can encourage, direct, and regulate new development and redevelopment within specified districts as well as acquire and redevelop areas on its own. A redevelopment authority can serve as a financing agency-- where businesses, developers, non-profit organizations, and community development groups can work with the authority to structure creative financing. The redevelopment authority can offer technical assistance and financial resources such as loans, loan guarantees, and bonding financing.

Timing: Short Term and Long Term

Implementation (policy, design, management): Policy and Management

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### TAX-INCREMENT FINANCING FOR REDEVELOPMENT

**Proposal: Allow for Tax Increment Financing (TIF) of redevelopment districts**

Opportunity: New construction, redevelopment and rehabilitation are critical to directing development to existing places where significant investment in

infrastructure has already been made. However, attracting development activity to existing urban areas can sometimes be a difficult process. Furthermore, financing such development is challenging, especially if there is a strong preference for a pay-as-you go development process. Tax Increment Financing is a way for governments (usually municipal authorities) to help finance new capital projects by taking advantage of expected property tax returns. A TIF is used to publicly finance needed public improvements and enhanced infrastructure in a defined area. The intended purpose is to promote the viability of existing businesses, and attract new commercial enterprises. The structural overview of a TIF is such that the cost of improvements to the area is repaid by the contributions of future tax revenues, or increments, within the TIF district over a period of time.

Issues: When considering Tax Increment Financing as a redevelopment tool, consideration should be given as to whether the original tax capacity is derived from property tax (typical) or sales tax, and whether the future increment will be collected from future increments of property or sales tax. Sales tax could be considered if the new development is primarily retail oriented, however most TIF structures are tied to property tax. Before creating a tax increment financing district, one should also estimate the potential increment realized over the life of the TIF against possible write downs the city may incur when transferring property. A TIF is commonly used to spur development either by creating or improving existing infrastructure. Therefore, one would be cautioned against using a TIF structure in a district where the intensity of the improvements is less than the original tax capacity. Similarly, using increment financing to build tax-exempt property may also invert the tax increment unless such increments are realized from other development sources. Lastly, but by no means conclusively, increment financing is a front-end development cost. Capital for development is derived from bonds whose value is derived from the estimated captured tax capacity of the increments. The bonds are repaid over a fixed period of time. The cost of carrying the interest during this time is also calculated into the bond repayment. In this regard, the tax increment flows must also exceed the identified development costs as well as any capitalizing interest.

Example: The State-Thomas TIF District, created in 1989, was Dallas' first of the seven TIF Districts. Located just north of downtown, this District has been built into a thriving pedestrian-friendly neighborhood by the joint public/private partnerships formed. This mixed-use neighborhood currently has over 2,000 built residential units and several other developments in the pipeline. See <http://www.dallas-edd.org/ardv.htm> for more information.

Timing: Short-Term

Implementation Type: Policy

## LAND USE AND DESIGN: CREATING SAFE AND RESILIENT COASTAL COMMUNITIES

### QUICKLY ADOPT FLOOD STANDARDS TO PROVIDE DEVELOPMENT CERTAINTY

**Proposal:** Adopt flood standards at the local level that are more protective than current FEMA standards.

**Opportunity:** Localities can adopt ordinances that are more protective than current FEMA standards. Ordinances can prohibit development in certain areas or require a "freeboard" a greater elevation than is required by the FEMA standards. This can reduce insurance rates and protect against future catastrophic weather events. Communities may wish to consider this given that the coast has experienced two events exceeding the 100-year flood in the last 40 years.

**Issues:** May raise construction costs in certain or require buy-outs on certain properties.

**Timing:** Short Term

**Implementation Type:** Policy

### PLAN AND PERMIT NEW NEIGHBORHOODS

**Proposal:** Plan and permit new neighborhoods for residents who wish to relocate out of harm's way.

**Opportunity:** Resident's may want to move out flood zones but still wish to remain within their community. Development of new neighborhoods in safe locations that maintain the character, tradition, and continuity of the existing town provides housing opportunities for these residents making buyouts and relocation a potentially more attractive and viable option.

**Issues:** Construction of new neighborhoods will need to occur quickly to move people out of temporary housing in an expeditious fashion.

**Timing:** Short Term

**Implementation Type:** Policy

### STATE DEFENSE OF LOCAL ZONING CHANGES

**Proposal:** The State Attorney General's office would have a "duty to defend" local zoning changes that have the effect of protecting flood zones against lawsuits that argue the need to develop under current and less protective zoning.

**Opportunity:** Localities can adopt ordinances that are more protective than the current zoning and will eventually be required to do so by FEMA. Ordinances can prohibit development in certain areas, require minimum elevations or require a "freeboard" a greater elevation than is required by the FEMA standards. (This can reduce insurance rates and protect against future catastrophic weather events.) Now that the destructive effects of Katrina are apparent, it may be desirable to re-think building south of Hwy 90 to prevent a future calamitous loss of life and property.

**Issues:** At the same time, lots have been platted and permits issued for development under pre-Katrina zoning. While changes in zoning may be desirable (and inevitable), and development rights largely unvested, any zoning changes that affect permitted development are likely to receive legal challenges that could overwhelm with town legal resources.

**Timing:** Short Term

**Implementation Type:** Policy

### TRADABLE DEVELOPMENT RIGHTS

**Proposal:** Establish a Tradable Development Rights Program within the coastal counties.

**Opportunity:** TDRs are an opportunity to concentrate development in certain areas, protect other critical areas from development, and compensate property owners where development is not encouraged. Rather than extinguishing development rights in areas slated for protection, a TDR program transfers those rights to other property allowing this "receiving property" to develop at greater densities than would otherwise be allowed.

**Issues:** TDRs may not be allowable in the State of Mississippi and thus would require enabling legislation. Also, an institutional "allowance holder" is often needed to account for the trades and/or bank available rights.

**Example:** Approximately 40,000 acres of the New Jersey Pinelands have been protected since the Pinelands Commission sanctioned the use of TDRs in 1981. New Jersey adopted a statewide TDR law in 2004; see <http://www.nj.gov/dca/osg/resources/tdr/index.shtml>.

**Timing:** Short-term

**Implementation Type:** Policy

## Recommended Actions *Continued*



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### NEW TOWN ZONING PREREQUISITES FOR NEW DEVELOPMENT

**Proposal: Create a process by which new “growth centers” can be established (and thereby become eligible for urban economic development and infrastructure). Criteria should include adoption of traditional neighborhood design zoning codes, street standards, subdivision regulations, etc.**

Opportunity: Counties will continue to grow. When large developments are planned in the county, the state and counties can encourage orderly development that makes efficient use of public resources and is prepared to function as a stand-alone town or hamlet or to be incorporated with existing municipalities.

Issues: Provision of urban services, particularly water and sewer may be prohibitively expensive if development is located far from water and sewer plants.

Timing: Intermediate

Implementation Type: Policy

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### TND PRE-REQUISITES FOR DEVELOPMENT INCENTIVES

**Proposal: Within growth centers and Regional Growth Transect, some development will contribute more to the realization of the community's rebuilding vision than others. Localities can encourage this development by preferentially providing infrastructure to these projects based upon certain project characteristics such as developing in accordance with traditional neighborhood design codes and plans.**

Opportunity: Traditional Neighborhood Development and other community goals can be encouraged by providing infrastructure, density bonuses, or other incentives. A scorecard can be developed against which to measure the quality of proposed developments. Incentives can be awarded either on a threshold or graduated basis. Using a threshold basis, projects that score better than a threshold level become eligible for incentives. Using a graduated system, the better a project scores, the more incentives for which it becomes eligible. Projects that fail to meet the desired level can be redesigned during negotiation with planning staff so they can achieve a higher score.

Issues: Incentives should be carefully selected such that when incentives are provided for projects that include businesses, existing businesses may feel that the new businesses are receiving unfair assistance.

Example: Austin, TX, has offered incentives for traditional neighborhood development, including reduced fees and reimbursement for building some infrastructure. The city uses a matrix to analyze development proposals. See <http://www.ci.austin.tx.us/smartgrowth/incentives.htm>.

Timing: Mid Term

Implementation Type: Policy

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### STREAM BUFFERS

**Proposal: Protect Natural Resource Based Economic Activity and Drinking Water with 300-foot average stream buffers, with 50-foot minimum (on 95% of the banks' length).**

Opportunity: The Coastal Counties are relatively undeveloped and are densely populated with streams, lakes and wetlands. Although still relatively undeveloped, fecal coli form is already a problem in some water bodies and other rivers regularly flood their banks due in part to development of impervious surface upstream. Water based industries, Tourism, seafood harvest, and natural resource tourism -- depend in large part on the quality of the water resources. In addition, in such a wet region, failure to protect water resources and mitigate the impacts of upstream development often translates into flooding and property damage in lower regions of the watershed. Three hundred-foot buffers (on average) around water bodies would help to prevent these problems before they flourish if left unchecked they can be very expensive to fix.

Issues: Good urbanism demands access to some water resources as well as occasional water crossings. Buffers might be as little as 50 feet in G3 and G4 areas. In addition, for citizens to care for local waters they must have access to them. Some exceptions could be allowed without damaging the integrity of the buffer.

Example: Hillsborough County, FL, instituted stream buffers to protect water quality; the buffers also act as a greenway system. See <http://www.hillsboroughcounty.org/parks/greenways>.

Timing: Mid-term

Implementation Type: Policy

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### SCHOOLS AS CENTERS OF COMMUNITIES

**Proposal: Locate and design schools as centers of communities. Devise a system whereby localities that minimize school bus transportation expenses (through intelligent siting and design) reap the benefits of those savings.**

Opportunity: Schools are often located far from existing development, in campus-like settings on large plots of land. This tends to draw residential development to the area, increases state school bussing costs, and makes it difficult to share other public assets (libraries, parks, sports facilities) with the school. Designed as centers of communities, students can walk to school, take advantage of other community assets, and the school can conveniently serve the needs of the community in the evening.

## Recommended Actions *Continued*

Issues: Some localities have “siting standards” that may need to be changed to allow community schools.

Example: See “Schools for Successful Communities,” a publication from US EPA and the Council of Educational Facility Planners, which includes case studies, available at <http://www.cefpi.org/pdf/SmartGrowthPub.pdf>.

Example: The Moore Square Museums Magnet Middle School is situated in the heart of Raleigh's cultural and arts district, providing students with a unique educational opportunity that draws on downtown cultural institutions. The new school is a source of pride and an important resource for the community. Within walking distance to diverse neighborhoods, it has helped strengthen and revitalize the surrounding area. See [http://www.epa.gov/smartgrowth/sg\\_awards\\_publication\\_final\\_10\\_17.htm - pub\\_schools](http://www.epa.gov/smartgrowth/sg_awards_publication_final_10_17.htm - pub_schools) for more information.

Timing: Short term

Implementation Type: Policy

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### INTENSIFY DEVELOPMENT ALONG THE NEW RAIL CORRIDOR AND BOULEVARD

**Proposal: Plan and zone for significant retail and residential on the new CSX boulevard and transit route.**

Opportunity: The Mississippi Gulf Coast has the demand to absorb more retail development. In addition, many of the main streets in the existing coastal downtowns are located in lower traffic areas (because of changes in traffic patterns). New retail is unlikely to locate on these existing main streets. The new CSX boulevard and transit will have the auto trips, transit trips and can be planned for higher density development that will make an attractive retail location. As opposed to other locations, retail in this location will also bolster the existing main streets and therefore the character of the towns.

Issues: The timing must be expedited before the demand for new retail is absorbed elsewhere.

Timing: Short term

Implementation Type: Policy

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### BUILDING REHAB CODES

**Proposal: Create separate building rehabilitation codes.**

Opportunity: Building codes regulating construction standards have been designed primarily to address the needs of new suburban construction and can therefore be a barrier to building rehabilitation. For example, when faced with the cost of retrofitting turn-of-the-century homes to meet current standards for

hallway width, ceiling height, door clearance, and the like, property owners may come to the conclusion that rehabilitation is not cost-effective and leave buildings to further deteriorate. The creation and adoption of separate codes to guide rehabilitation of older buildings encourages their renovation, an important new source of potentially affordable housing.

Issues: Administration of separate codes may require staff training.

Timing: Short-term

Implementation Type: Policy

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### STATEWIDE HISTORIC PRESERVATION TAX CREDIT

**Proposal: Adopt a statewide historic preservation tax credit.**

Opportunity: Historic preservation tax credits are a powerful spur redevelopment, improve tax base, and preserve cultural heritage. Experience suggests that the tax credit should be for 15-25% of the costs of renovation and should be transferable so that projects can cash flow in the first year.

Issues: The more widely used the tax is the more obvious the impact on foregone state revenue. The experience in Maryland and Rhode Island showed that the return on their state investment has been a net positive. However, if the returns are not closely accounted for and communicated to the legislature, a perception can develop that this tax credit is a revenue loser and may jeopardize the tax credit.

Timing: Short-term

Implementation Type: Policy

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### TRADITIONAL NEIGHBORHOOD DEVELOPMENT IN THE COUNTIES

**Proposal: Adopt traditional neighborhood development in the unincorporated counties.**

Opportunity: Development will still occur in areas that are not designated as “growth centers.” This development is currently often scattered, strains physical and natural infrastructure, can provide poor accessibility for residents, and provides few opportunities for economic development made possible by clustering. The counties can reduce strains on their infrastructure, lessen fragmentation of their natural resource-based economies, and provide clusters for business opportunities. Important steps in realizing this vision are to adapt and adopt the Smartcode, provide for land application and treatment of wastewater, create hamlets to accommodate more walkable development, and ensure the performance of septic systems for lower density development.



## Recommended Actions *Continued*

Issues: Rezoning can be controversial. Incentives may be needed to facilitate the transition. Establishing a transferable development rights program may be key.

Timing: Mid Range

Implementation Type: Policy, Design, and Management.

### FIXING STRIP DEVELOPMENT

#### **Proposal: Redevelop strip retail areas**

Opportunity: Create higher density, mixed-use development out of strip shopping centers that have passed their economic life.

Issues: Some strip retail was past economic viability even before Katrina, and does not make sense to replace as it was. Because strip retail locations typically line arterial streets and are close to residential areas, they are good candidates to increase density and mix of uses to take advantage of good transportation and access to markets. By replacing one-story single-use buildings with multi-story mixed-use buildings lining the arterial streets, we increase residential and job opportunities, tax base, and potentially transit markets while enhancing urban form and walkability. Because these parcels are typically larger and under single, corporate ownership, issues with assembly, cleanup, and financing can be minimized.

Timing: Short Term and Long Term

Implementation (policy, design, management): Policy and Design

Implementation Type: Policy

### HOUSING POLICY: ENCOURAGING NEIGHBORHOODS OF CHOICE AND OPPORTUNITY

#### REGIONAL AFFORDABLE HOUSING STRATEGY

#### **Proposal: Create and implement a regional plan for affordable housing.**

Opportunity: Housing in the Gulf Coast towns is currently relatively affordable and few concentrations of affordable housing are evident. This condition is enviable and should be sustained. Under fair-share housing allocation plans, regions within a metropolitan area agree on a comprehensive, region-wide plan for the distribution of affordable housing units. Implementation of the plan may require localities to change zoning standards or create incentives for private development where the market is not able to generate an appropriate range of options on its own. Central to the agreement is the recognition that a range of

housing is necessary, particularly affordable housing near jobs, including those of service workers, schoolteachers, and public safety officials. Inclusionary zoning which requires that all new housing developments incorporate a portion of affordable units - is one tool that can be used to implement this plan but can also be applied absent a regional agreement. In the form of a regulatory program, penalties are put in place for localities that fail to comply with the regional agreement. As an incentive program, the state could allocate more Community Development Block Grants and Low Income Housing Tax Credits to localities that participate in the plan.

Issues: The creation and implementation of an affordable housing allocation plan is largely a matter of political will and may require local officials to buck the current trend toward "fiscal zoning." Use of the inclusionary zoning approach for implementing regional planning works most effectively when paired with density bonuses to compensate builders for the foregone profit on affordable set-asides.

Example: Portland, Oregon, has adopted a Regional Affordable Housing Strategy (RAHS) that calls for local governments within the region to adopt "voluntary affordable housing production goals," see <http://www.metro-region.org/article.cfm?ArticleID=417> for more information.

Example: The Moderately Priced Dwelling Unit program of Montgomery County, MD, is the most well known version of an inclusionary zoning program, see [http://www.montgomerycountymd.gov/dhctmpl.asp?url=/Content/DHCA/housing/housing\\_P/mpdu.asp](http://www.montgomerycountymd.gov/dhctmpl.asp?url=/Content/DHCA/housing/housing_P/mpdu.asp) for more information.

Timing: Short-term and Intermediate

Implementation Type: Policy

### EMPLOYER ASSISTED HOUSING PROGRAMS

#### **Proposal: Establish an employer-assisted housing program.**

Opportunity: An adequate supply of affordable housing can be a major asset for regional economic development and a key to attracting talented employees. Some casinos and other employees have provided recent (and typically informal) housing assistance. It may be a good time to formalize some of those arrangements, including: working with employers to match down-payment assistance, leverage housing-development financing, and provide technical assistance for communities interested in expanding their affordable housing.

Issues: Housing affordability may not seem like a huge issue yet, but if the area begins to gentrify in response the targeted new post-Katrina investments, it may be too late to address it using the best and most widely available tools.

Example: The Maryland Department of Housing and Community Development implemented a pilot "Live Near Your Work" Program to encourage employees of Maryland businesses and institutions to buy homes near their workplace, see <http://www.aboutwoodberry.com/webpages/livenrwork.html> for more information.

Timing: Short-term and Mid-term

Implementation Type: Policy

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#### EXPEDITED APPROVAL FOR AFFORDABLE UNITS

**Proposal: Provide expedited approval for projects that include affordable units.**

Opportunity: Local governments can provide incentives for targeted types of development through their approval processes. Time-consuming processes required to secure waivers and variances often hamper developers who seek to create projects that advance smart growth and create a wider range of housing choices. This will be particularly effective if guaranteed review time frames are provided.

Issues: Projects that include affordable housing may be more controversial and require more public input. Including a broad mix of housing types may diminish opposition.

Example: In summer 2003, the Maryland-National Capital Park and Planning Commission announced the initiation of an expedited development approval process for affordable housing projects in Montgomery County, MD, called the "green tape process for affordable housing," see <http://permittingservices.montgomerycountymd.gov/dpstmpl.asp?url=/permitting/gi/nfah.asp> for more information.

Timing: Mid-term

Implementation Type: Management

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#### DENSITY BONUSES FOR AFFORDABLE UNITS

**Proposal: Provide density bonuses in exchange for inclusion of affordable units, particularly at proposed transit stations.**

Opportunity: Developers and builders usually forgo revenue by providing affordable units. This revenue can be recouped by allowing additional units to be built (over and above what would be allowed without the affordable units). The density bonus can be set to match or even improve a project's profitability. This technique can be especially effective in areas close to high quality transit where the market often demands higher density and where low income residents can access transportation without owning a car. In addition, when located near transit the number of parking spaces needed can often be reduced providing additional cost savings.

Issues: Unless additional policy measures are put in place (deed restrictions on resale price or other mechanisms) the unit may become unaffordable after the first sale.

Timing: Short term

Implementation Type: Policy

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#### LINKED BANK DEPOSITS FOR LOW INTEREST LOANS

**Proposal: Linked deposits provide below market financing for production of affordable housing.**

Opportunity: Local governments can invest some percentage of their tax revenues in participating banks at below-market rates. In exchange, the banks commit to passing on the savings to borrowers in the form of low-interest loans for affordable housing production.

Issues: Foregone revenue. May require state enabling legislation.

Timing: Intermediate

Implementation Type: Policy

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#### TARGETING LOW INCOME HOUSING TAX CREDIT

**Proposal: Targeted application of the Low Income Housing Tax Credit.**

Opportunity: The low-income housing tax credit (LIHTC) program provides for the State distribution of federal tax credits to for-profit and nonprofit developers of affordable housing. States determine the distribution and priority uses of their credits through qualified allocation plans (QAPs), which set requirements for the use of tax credits beyond those set by the federal government. All states are required to give priority to the use of tax credits for housing proposed in conjunction with concerted community revitalization efforts. At the state level, many QAPs require compliance with the local or state consolidated plan to encourage better future planning for growth and housing needs. In addition, state QAPs may give priority to preservation projects, thereby providing a means to rehabilitate existing structures and leverage investment in existing neighborhoods. In addition to providing a source of funds for affordable housing during the Gulf Coast rebuilding, funds could be directed to localities that have cooperated to create affordable housing plans and targets for production.

Issue: LIHTC resources are scarce and changing allocation methods may be challenging though perhaps possible on an emergency basis.

Timing: Intermediate

Implementation Type: Policy



## Recommended Actions *Continued*

### LAND BANKING FOR AFFORDABLE HOUSING

**Proposal: Provide for affordable housing in the future by creating community land trusts.**

Opportunity: In communities that follow the town planning outlined by the Governor's Commission future land and housing values may well rise, particularly in areas that are slated for major changes. In these areas, long-term affordability may be a concern. Community Land Trusts (CLTs) are a mechanism by which nonprofit organizations own land and low-income homeowners own the improvements on it, which reduces the cost of purchase for targeted homeowners. The homeowner has access to a long-term lease on the land, which is owned by the land trust in perpetuity. When housing subsidies to assist low-income homeowners are channeled through CLTs to acquire or rehabilitate properties, the subsidy can be retained over the long-term through the CLT's share of the property, thereby creating a permanent source of affordable housing. Depending on the conditions of the CLT, homeowners may be able to capture a share of the appreciation of the house, although the total cost of purchase will be retained at a below-market level to ensure that it remains affordable for future home buyers.

Issues: CLTs require resources to operate, to manage changes in ownership, and to acquire new properties.

Timing: Mid-term

Implementation Type: Policy

### GOVERNANCE: COORDINATION TO SUPPORT EFFECTIVE REBUILDING

#### DATA CONSISTENCY

**Proposal: Agree on information collection and storage protocols to ensure consistency of information among municipalities and the coastal counties.**

Opportunity: Effective disaster recovery, rebuilding and renewal efforts require substantial sums of information across the affected region. Consistent data collection and formatting within the coastal region would help to prepare for future events and recovery.

Issues: Staff time and turnover.

Timing: Short-term

Implementation Type: Management

### SYNCHRONIZE INVESTMENTS

**Proposal: Require consistency among water and sewer investments and extensions, transportation infrastructure provision, school siting, and zoning designations.**

Opportunity: Government can send clear signals to the private sector about how best to leverage government investment by making consistent, reinforcing investments and decisions. In addition, government assets can achieve more efficient utilization when they are put in place in a concerted, rather than piecemeal fashion.

Issues: Decision-making authority is distributed among different entities including municipalities and counties. A state level incentive could help to facilitate consistency among actions.

Implementation Type: Management

### EMERGENCY COMMUNICATIONS

**Proposal: Standardize regional communication systems.**

Opportunity: During emergency events good regional communication is critical. Currently jurisdictions operate different and sometimes incompatible communication systems. Good communications can alert adjacent jurisdictions to road outages, available resources, etc.

Issues: Some jurisdictions will need to change their systems at some cost.

Timing: Short Term

Implementation Type: Management

### REGIONAL COOPERATION

**Proposal: Adopt regional tax base sharing for retail exceeding 75,000 square feet.**

Opportunity: The future location and design of large retail establishments will have a major impact on the eleven towns on the Gulf Coast. Local governments will need to work to ensure that large new retail supports their town's existing economies, and makes the most of public investments in transportation choice and public amenities. Competition for tax base between nearby localities sometimes can undermine local government efforts to achieve acceptable designs and locations for large retail development. Sharing tax revenues from these establishments will reduce retailers' ability to "play one locality against the other."

Issues: Localities must work out multi-jurisdiction agreements that span the "market catchment area" of the retail establishment. In addition, the percentage of the revenue to be apportioned to each jurisdiction must be determined recognizing that the host community ultimately must also provide services for the retailer.

Example: Minnesota's program pools revenues from commercial and industrial growth in seven counties in the Twin Cities area and is administered by Anoka County. See <http://cfpub.epa.gov/sgpdb/policy.cfm?policyid=241> .

Timing: Mid-Term

Implementation Type: Policy

### INFRASTRUCTURE INVESTMENT TO SUPPORT REBUILDING AND RENEWAL

#### UTILITY UNDERGROUNDING

**Proposal: Use opportunity of reconstructing street to underground utilities, with priority to retail and commercial streets and establish policies to require new utilities to be run underground.**

Opportunity: Pole mounted power and telephone lines are especially at risk in a storm event. Considerable reconstruction of local roads is a chance to place overhead utilities underground in many towns.

Issues: This is an important aesthetic issue, but has not necessarily had a major impact on retail performance. Charleston, for instance, the most successful comparable retail environment in the Southeast, has overhead utilities. The road rebuilding is an opportunity to more cost-effectively do the utility relocation, but the expense may still be considerable. There may also be a preexisting problem with corrosion of underground power lines.

Timing: Short Term

Implementation Type: Design, Management, and Policy

#### UPGRADE WASTEWATER SYSTEMS

**Proposal: Direct State SRF funds to upgrade wastewater distribution systems in the 11 coastal towns in combination with infill and redevelopment projects.**

Opportunity: Deteriorated wastewater infrastructure may be a barrier to redevelopment and infill if developers anticipate the need to upgrade wastewater infrastructure in preparation for development. The wastewater SRF can be directed to support infill development and redevelopment and the anticipated increase in tax base can help to repay the low interest loans.

Issues: Funds are limited and because it's a loan and not a grant, localities may be leery of taking on debt. A small percentage of the SRF is available as grant funding.

Timing: Short Term

Implementation Type: Policy

### STATE ACTIONS

#### STATE INVESTMENT AND LOCATION DECISIONS

**Proposal: Target State infrastructure investments including the location of State offices and services to support the Gulf Coast community vision.**

Opportunity: State transportation investments, economic development incentives, housing grants, and building location can reinforce coastal town rebuilding plans and should be guided by local plans.

Issues: Historically, other considerations have guided state investment and location decisions and many are invested in the status quo.

Example: Pennsylvania's law requires the department of general services to establish guidelines for State agencies that facilitate downtown siting. Agencies are afforded flexibility to consider factors such as the availability of public transportation, public safety, and local economic impact. For more information see <http://www.dep.state.pa.us/dep/deputate/polycomm/update/06-23-00/062300u2.htm>

Timing: Short Term and Long Term

Implementation Type: Policy and Management

#### FIX IT FIRST

**Proposal: Adopt a statewide "Fix it First" policy**

Opportunity: "Fix it First" makes maintaining and enhancing existing infrastructure the top priority of state infrastructure funding programs. The goals of this policy are several. Some states adopt it as a fiscally prudent measure, seeking to minimize deferred maintenance costs and maximize return on investment over the life of the public asset. In addition, some view the need to support existing neighborhoods and communities as the paramount goal. In doing so, they seek to ensure that private sector investments made in conjunction with public sector infrastructure are not stranded by neglect. In addition, public reinvestment often leads to additional private sector investment and potential synergies between existing business activity and new business or residential development.



## Recommended Actions *Continued*

Issues: Limited infrastructure funds are in great demand. Directing funds to support existing infrastructure first requires a clear, well articulated rationale, but once accomplished can bring greater certainty and predictability to the development market place.

Timing: Short Term

Implementation Type: Policy

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### **PRESERVE HIGHWAY CAPACITY**

**Proposal: Create a highway capacity preservation program.**

Opportunity: Protect the capacity on key, designated state highways through access management and municipal planning around interchanges.

Issues: Many state highways lose their functionality as they become lined with driveways for commercial development. Similarly, interstate highways can suffer reduced usefulness if they are a primary means of making local and intra-regional trips. These roadways are meant to serve regional and statewide traffic, but in practice many end up becoming the equivalent of congested arterials. The state DOT has an opportunity to preserve intended capacity by working with the affected municipalities and property owners to manage access points and create land use plans at interchanges that can minimize the amount of traffic on the road. Where needed the DOT may also want to consider purchasing development rights in order to transfer development to a more appropriate location that won't overly burden the corridor.

Timing: Short Term and Long Term

Implementation Type: Policy and Management