

## Specific Areas of Interest

- Capacity of CAT to service events on Tybee Island
- Pathways that can offer the most ease of access for bus transport
- Identification of the most optimal pickup and drop-off sites
- Need for clear organization and advertising
- Mileage estimates for the chosen routes
- Identification of large venues (festivals) and gathering sites
- Population demographics with relation to age and location
- Identification of hardened locations that may assist in terms of a hurricane
- Number of Tele-ride and special needs populations on the island and along the study route
- Inclusion of CEMA plans with relation to prepositioning and accessibility
- Waterway access route identification to the Savannah River
- Identification of EMS service calls and utilization
- Identification of possible places to serve as holding areas (a contingency plan) in case of storms before buses arrive for transport
- Time phasing
- Identification of routes that support convenience
- Coordination of bus stops with Tybee Island Comprehensive Plan's business centers
- Identification / inclusion of the parking reservoirs
- Coordination with Master Plan
- Think creatively on methods for changing human habits
- Identify the three lane sections on the highway between the Lazaretto and Bull River Bridges
- Identify those points on the highway
- Develop a baseline for acceptable services
- Utilize data on pier use and rentals
- Consider the Johnny Mercer ball field and bus-stop location during festival pick-up
- Consider data related to arrests and citizen disputes
- Consider GIS data on zoning, planning and infrastructure
- Incorporate message board options to educate drivers on available parking lots
- Integrate historic police intelligence
- Identify where police resources are being utilized



# Wave Ecology

## A Study of the Highway 80 Tybee Island Corridor

Chatham County, Georgia



# Why an Ecological Study?

## Ecosystem Ecology

Ecosystem ecology examines the population, community, and physiological structures within a boundary area to determine their interaction and interdependence. Understanding the cycling of matter and flow of energy through the ecosystem helps planners understand opportunities and threats posed to our communities.

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## Urban Ecology

Urban ecology is a subfield of ecology that allows for the study of characteristics from the urban, human environment. Defining and examining the relationship of natural ecosystems to our built environment often reveals opportunities to strengthen the health and biodiversity of our communities.

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## Tybee Island Wave Ecology

Examining the ecosystem of the Highway 80 Tybee Island Corridor will reveal the needs and flow patterns of people in relation to the natural rhythms significant to this rich coastal ecosystem. Through mapping and visual tools near-term solutions to handling traffic congestion during seasonal fluxes and times of imbalance may emerge.

# Shaping the Boundaries

## Two Waves & Changing Tides

Just as there is a natural tidal wave pattern to Tybee Island, population fluxes and human demands place another tide on this island.

Outlined below are the two waves and emerging areas for examination in this study:

### The Environmental Wave

- Tidal Patterns
- Rainfall Patterns
- Species Migration
- Sea Level Rise and Infrastructure Impact
- Erosion and Land Changes
- Shade Patterns via Tree Canopies
- Wetlands and Sensitive Micro-ecosystems

### The Human Wave

- Corridor Mobility (Peak Demand Times)
- Tybee Island Mobility
- Energy Flux (Consumption Trends and Heat Islands)
- Population Spectrum (Age Demographics, Education Levels, and Quality of Life Necessities)
- Historic Land Use and Mobility Changes
- Greenhouse Gas Emissions

## High Priority Concerns

- Safety
- Traffic Tidal Flow
- Shallow Coastal Flooding
- Sustainable Community Growth
- Peak Demand Management

