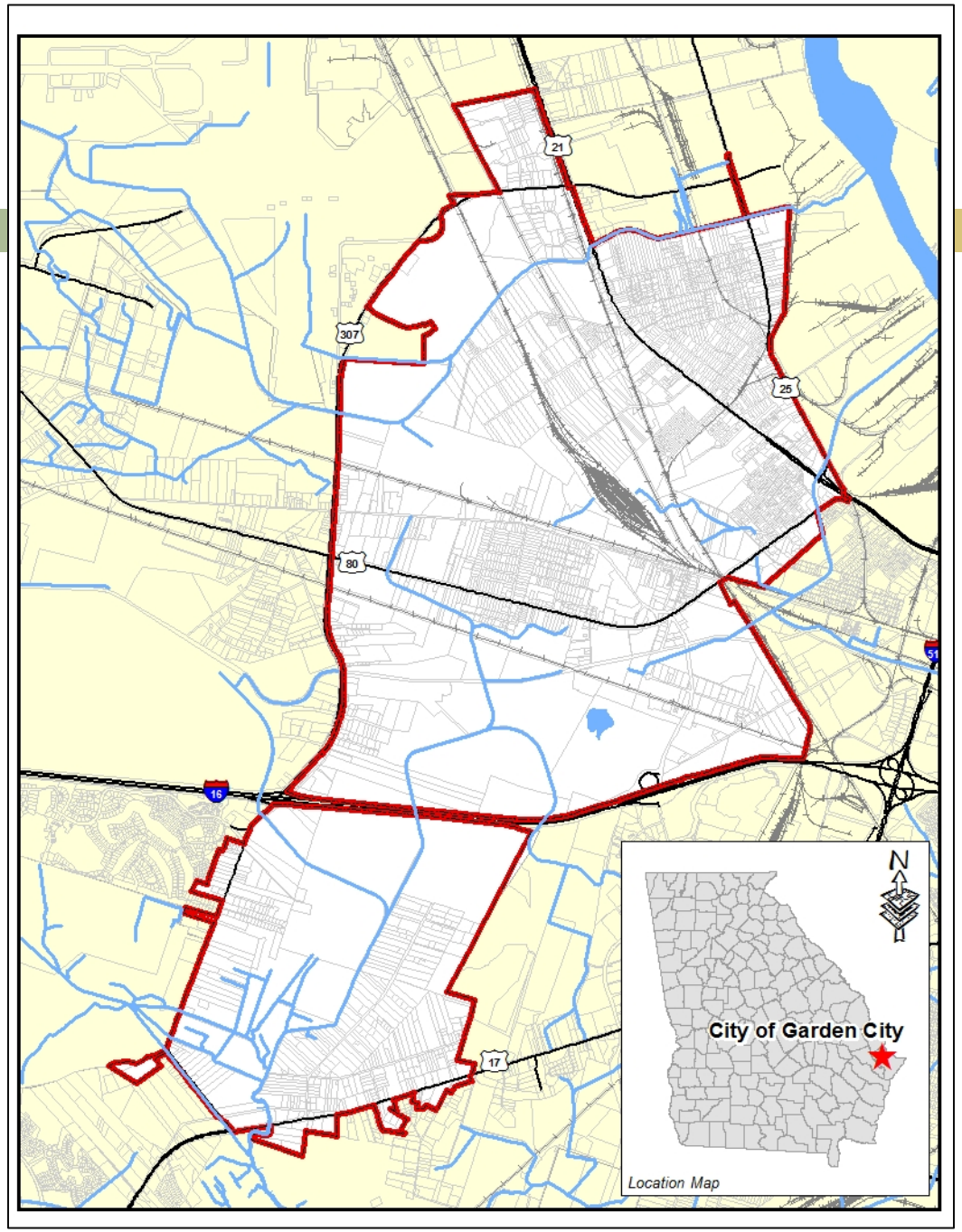
GARDEN CITY:
A DISASTER RESILIENT COMMUNITY

Georgia Environmental Conference
August 22-24, 2012
Savannah, GA

Coastal Incentive Grant



Garden City, Georgia Overview

- Incorporated: 1939
- Location: Chatham County, GA
- Geographic Area: 14.6 Square Miles
- Population: 8,778
- Adjacent to GA Ports Authority – Garden City Terminal
- Average Elevation = 13Ft above sea level

Introduction

- Coastal Incentive Grant
  - Received from the Department of Natural Resources – Coastal Resources Division
  - To assist the City in developing a model and plan for addressing coastal hazards

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

Introduction

Year 1

- Coastal Hazards Risk & Vulnerability Assessment
- GIS Database Planning Tool
- Greenhouse Gas Emissions Inventory
- Emergency Operations Plan (EOP)

Year 2

- Integration into Planning Documents
- Update Development Codes and Review Procedures
- Local Leaders Education Workshop

Introduction

Stakeholders

- City Staff
- City Council
- Planning Commission
- CEMA
- Health Department
- Univ. of Georgia
- West Chatham Cities
- Board of Education
- Georgia Conservancy
- Georgia Ports Authority
- Ga Dept of Community Affairs
- DNR - Coastal Resources Division
- Skidaway Instit. Of Oceanography

Coastal Vulnerability & Risk Assessment

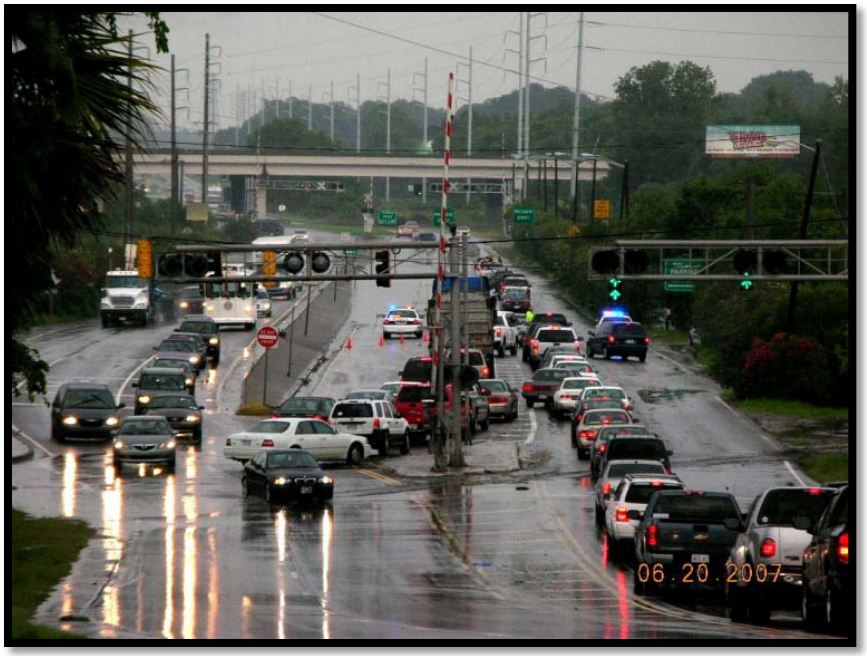
Assessment of current and projected coastal hazards that threaten social and environmental sustainability

Risk & Vulnerability Assessment

- Climatic activities that affect the City
  - Hurricanes
  - Storm Surges
  - Tornados
  - Severe Storms
  - Flooding
  - Drought
  - Sea Level Rise
  - High / Low Temperatures

Risk & Vulnerability Assessment

- What areas of the City are vulnerable and/or at risk?
  - Built Environment
  - Infrastructure
  - Transportation
  - Environmental Features
  - City Services
  - Emergency Operations



Risk & Vulnerability Assessment

City Services

- Water & Sewer
- Stormwater
- Sanitation
- Police / Fire
- Administration

Considerations

- Age of infrastructure
- Wells
- Lift Stations
- WWTP
- Water Quality
- Debris
- Communication networks
- Ability to conduct business
- Capital Projects

Risk & Vulnerability Assessment

Built Environment

- Residential
- Commercial
- Critical Facilities

Considerations

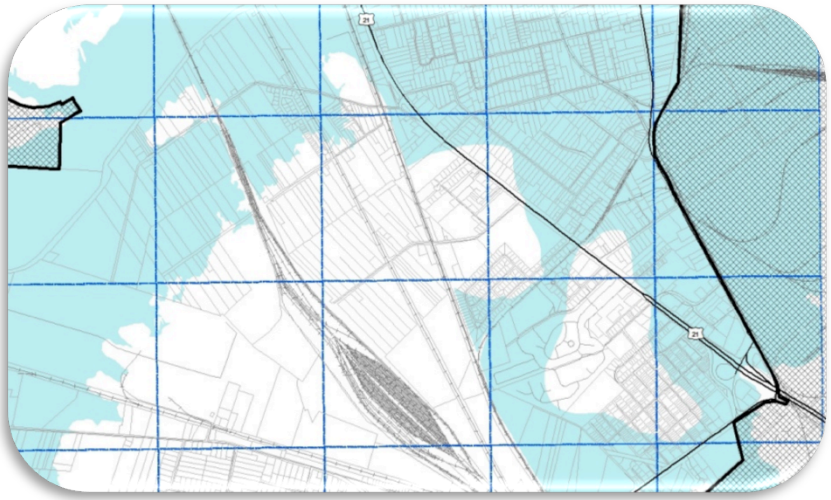
- Flooding
- Age of structures
- Structural Damage
- Location
- Threat of Fire
- Energy Usage
- Economy
- Existing Codes

GIS Database Planning Tool

Developed to assist with the assessment of risk and vulnerability

West Chatham GIS Planning Tool

Flood Zones



Flood Zones Assessment

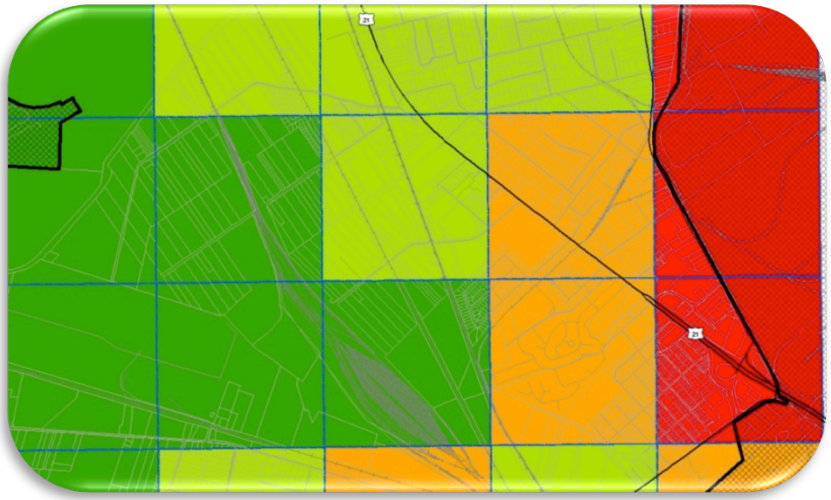
Establish Scoring Criteria

Less than 25%	= 1	50% - 75%	= 3
25% - 50%	= 2	Greater than 75%	= 4

West Chatham GIS Planning Tool

Impervious Area

Impervious Area Assessment

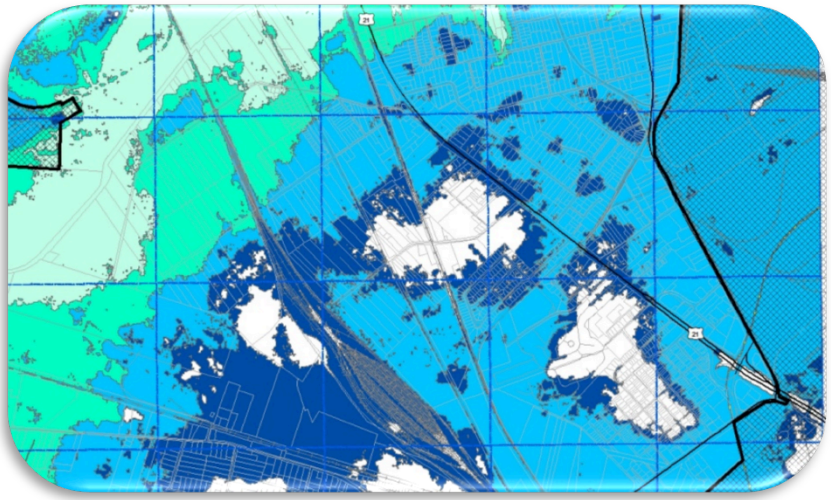


Establish Scoring Criteria

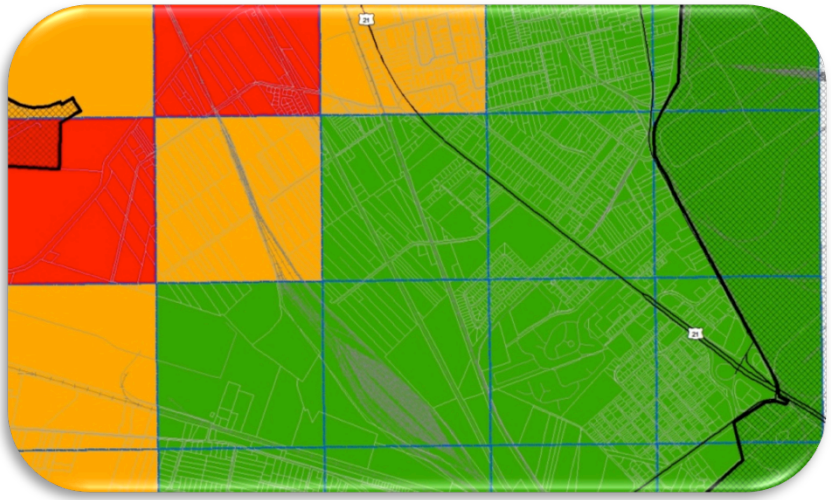
Less than 10%	= 1	20% - 30%	= 3
10% - 20%	= 2	Greater than 30%	= 4

West Chatham GIS Planning Tool

Storm Surge – Category 3



Storm Surge Assessment



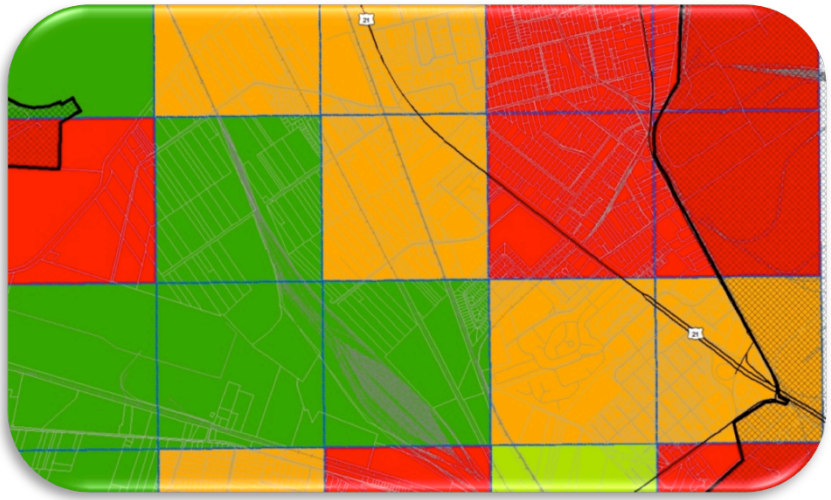
Establish Scoring Criteria

Less than 25%	= 1	50% - 75%	= 3
25% - 50%	= 2	Greater than 75%	= 4

West Chatham GIS Planning Tool

Building Values

Building Value Assessment

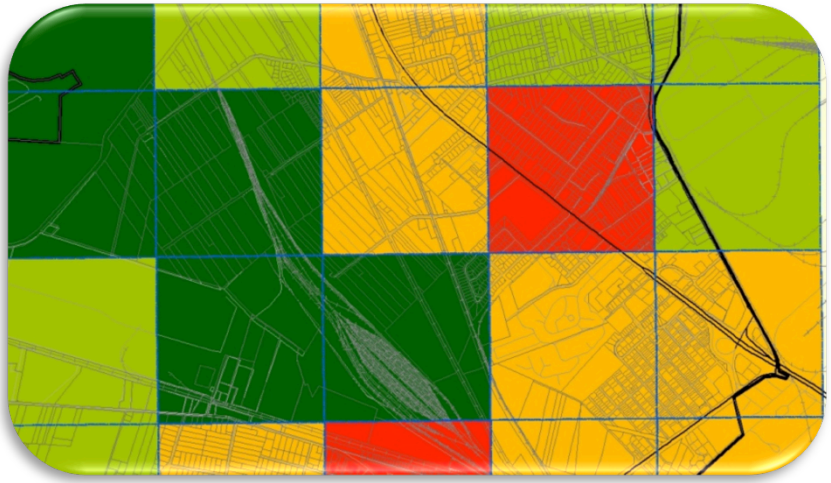


Establish Scoring Criteria

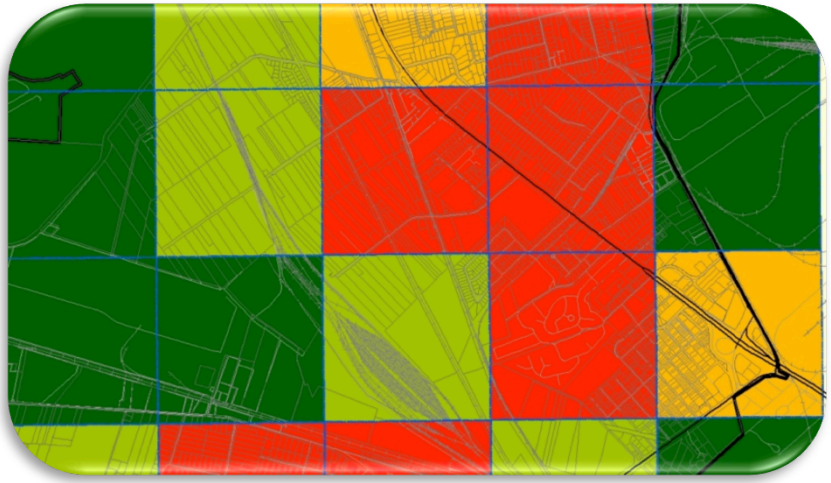
Less than $7 Million	= 1	$14 - $25 Million	= 3
$7 - $14 Million	= 2	Greater than $25 Million	= 4

West Chatham GIS Planning Tool

Day time Population



Night time Population



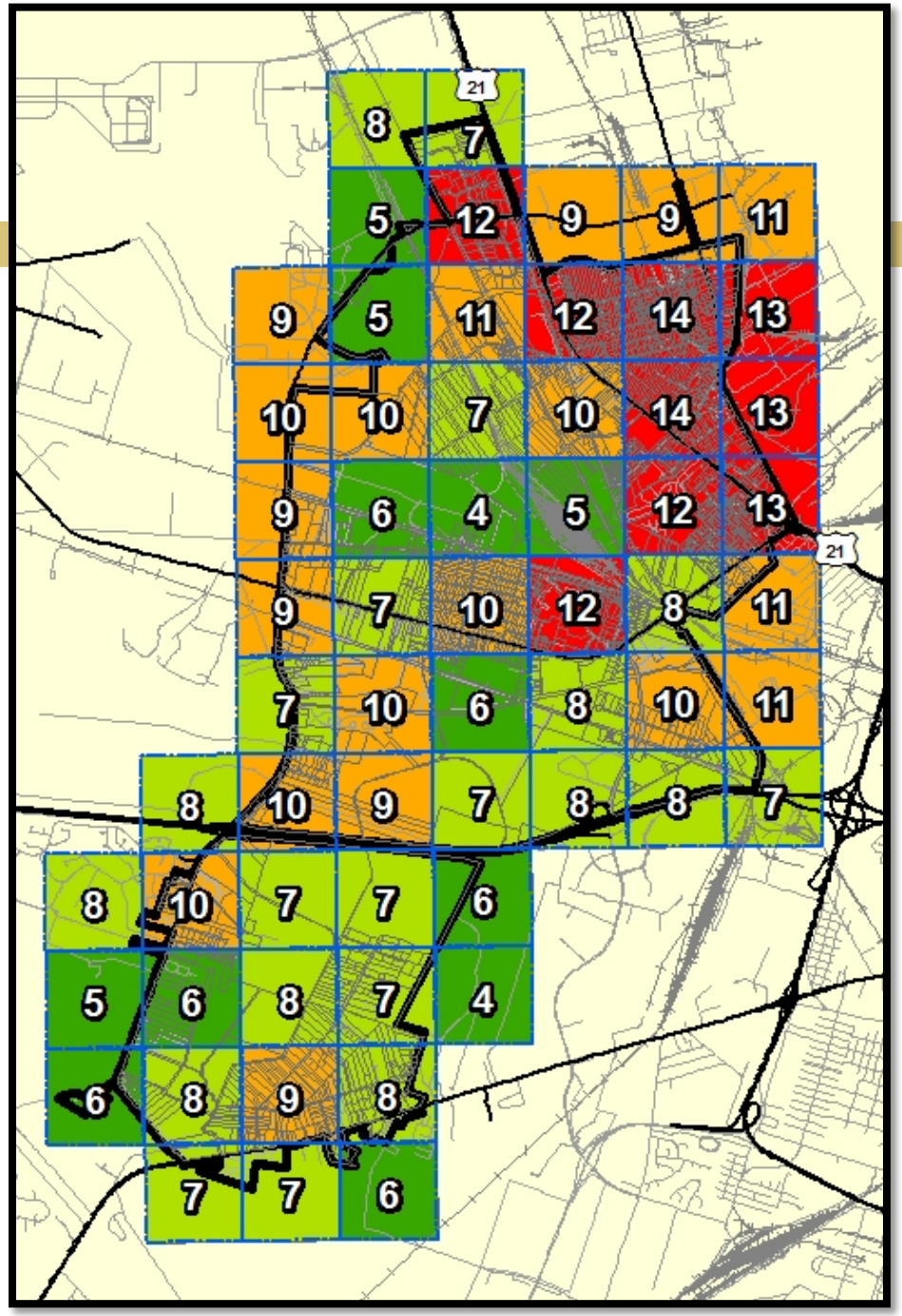
Establish Scoring Criteria

Less than 50 People	= 1	200 – 500 People	= 3
50 – 200 People	= 2	Greater than 500 People	= 4

GIS Tool

Data Analysis

Utilizing the GIS Planning Tool to make quick, informed decisions



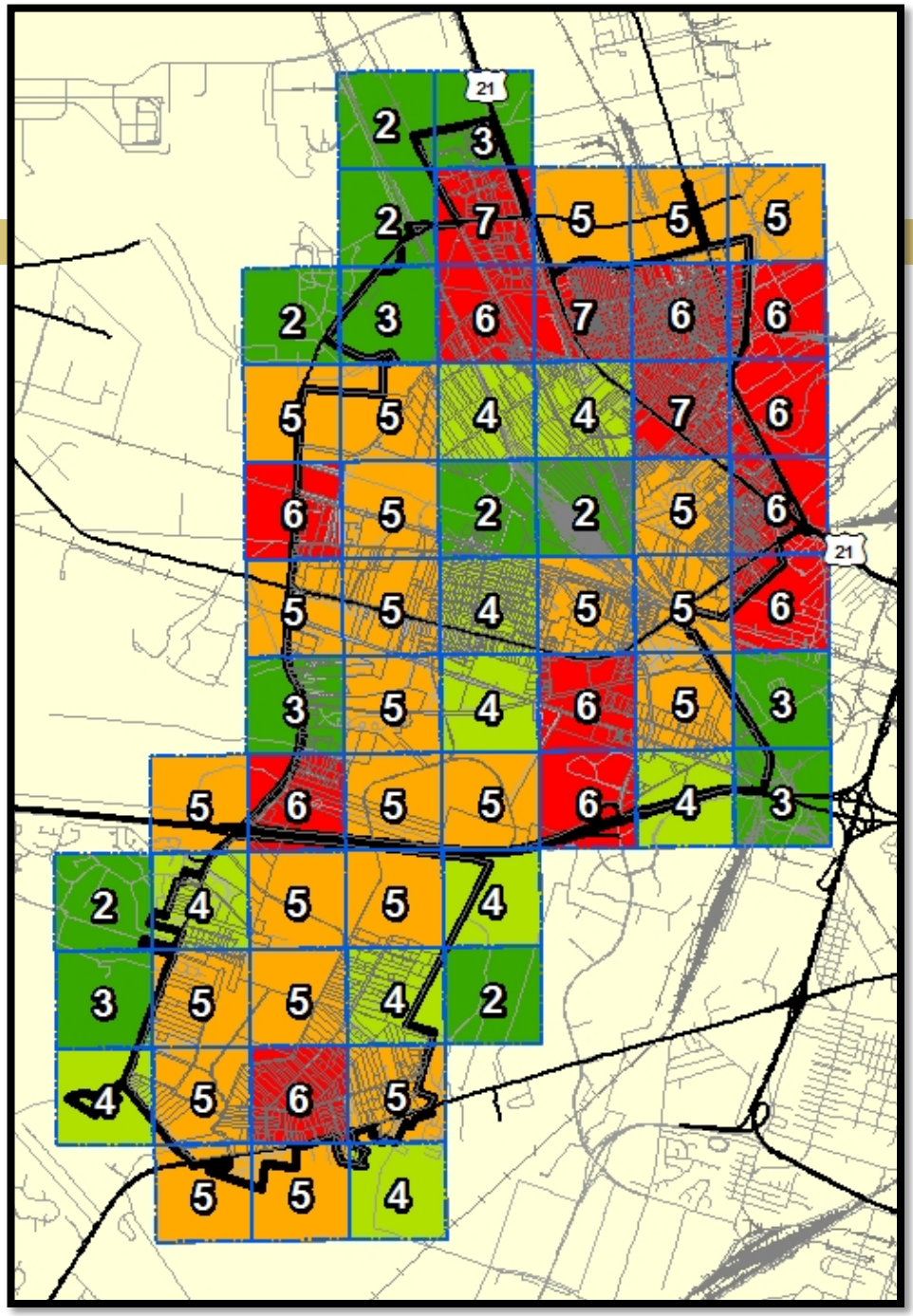
Scored based on flood, impervious, bldg value, and night time pop.
Total 16

GIS Tool

Data Analysis

Utilizing the GIS Planning Tool to make quick, informed decisions

Scored based on flood, and day time population. **Total 8**



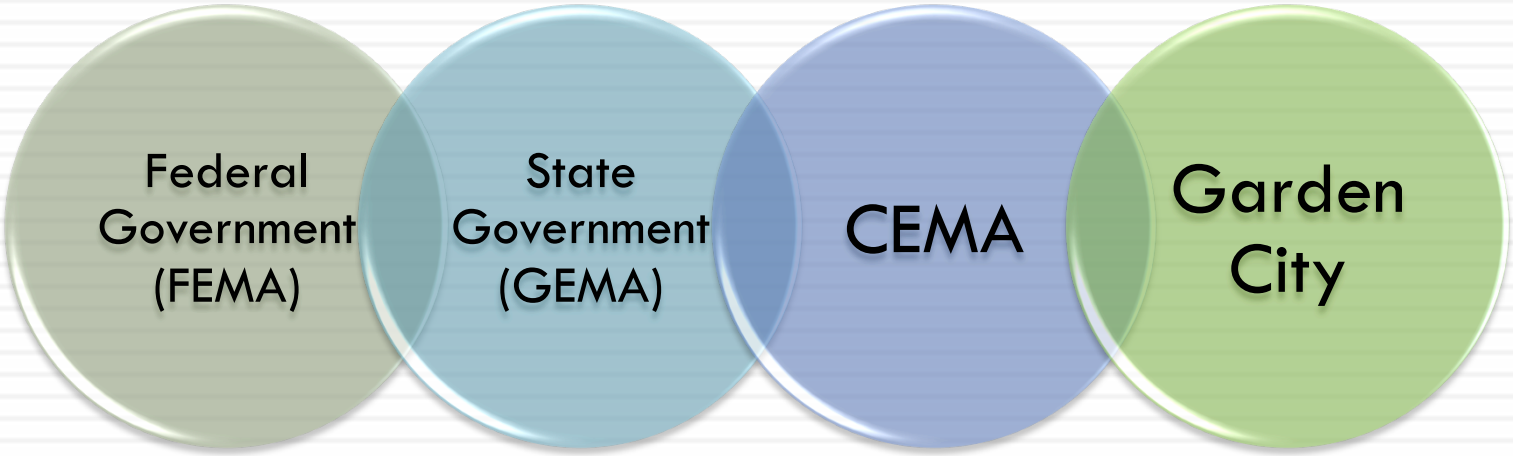
Greenhouse Gas Emissions Inventory

- ✓ Assessment of the impact government operations have on climate change
- ✓ Evaluation of potential policies to reduce greenhouse gas emissions

Sectors

- Facilities
- Vehicle Fleet
- Refrigerants & Fire Suppressants
- Employee Commute
- Government Generated Waste
- Wastewater Treatment
- Contracted Services

Emergency Operation Planning



Chatham Emergency Management Agency (CEMA)

Mission

- **Protect lives and property** from the threat of natural and manmade incidents of critical significance.

Functions of CEMA

- Develop, coordinate & implement county-wide plans
- Assist the public & private sector develop plans
- Maintain the county EOC
- Issue emergency instructions & alerts
- Respond to emergencies
- Develop, coordinate & conduct training & exercises
- Community outreach

Emergency Operations Plan (EOP)

Establishes a framework for public and private agencies to:

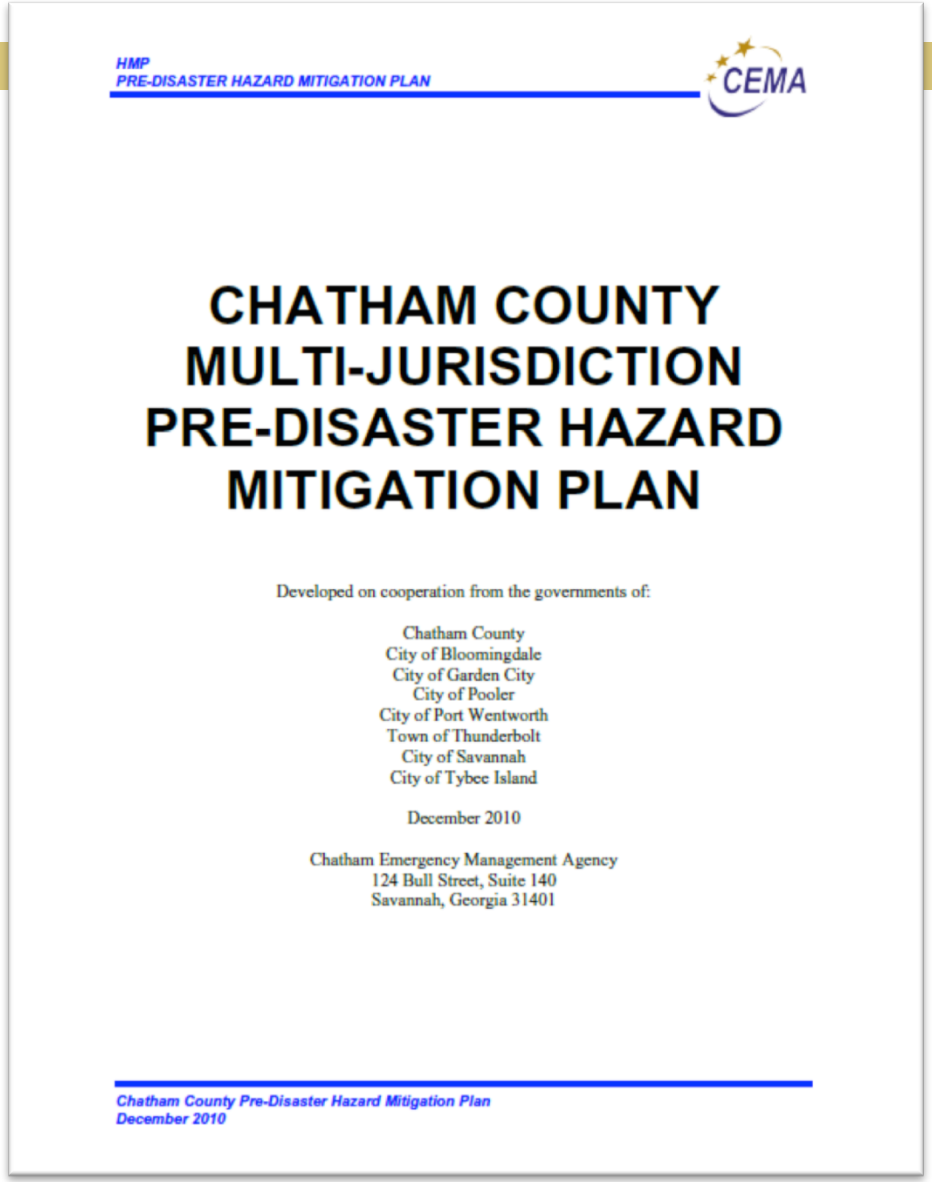
- Prevent emergency situations
- Protect residents from the effects of disasters
- Reduce infrastructure vulnerabilities during disasters
- Respond effectively and efficiently to emergencies
- Provide for rapid recovery.

CEMA Hazards Mitigation Plan

Evaluates All Hazards based on likelihood and possible consequences.

Identifies

- Goals
- Objectives
- Mitigation Actions



HMP
PRE-DISASTER HAZARD MITIGATION PLAN

CEMA

CHATHAM COUNTY MULTI-JURISDICTION PRE-DISASTER HAZARD MITIGATION PLAN

Developed on cooperation from the governments of:

Chatham County
City of Bloomingdale
City of Garden City
City of Pooler
City of Port Wentworth
Town of Thunderbolt
City of Savannah
City of Tybee Island

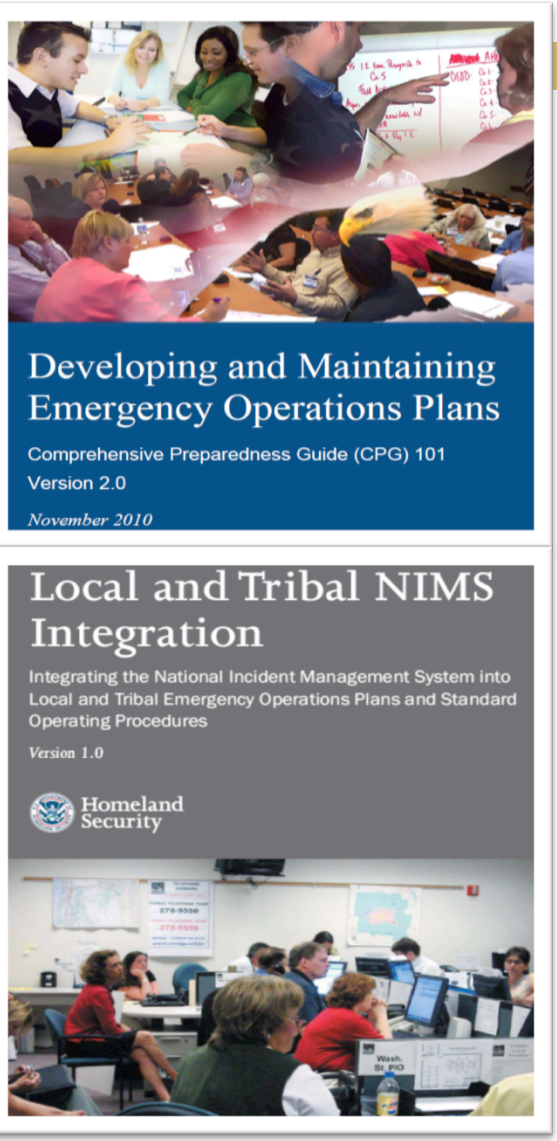
December 2010

Chatham Emergency Management Agency
124 Bull Street, Suite 140
Savannah, Georgia 31401

Chatham County Pre-Disaster Hazard Mitigation Plan
December 2010

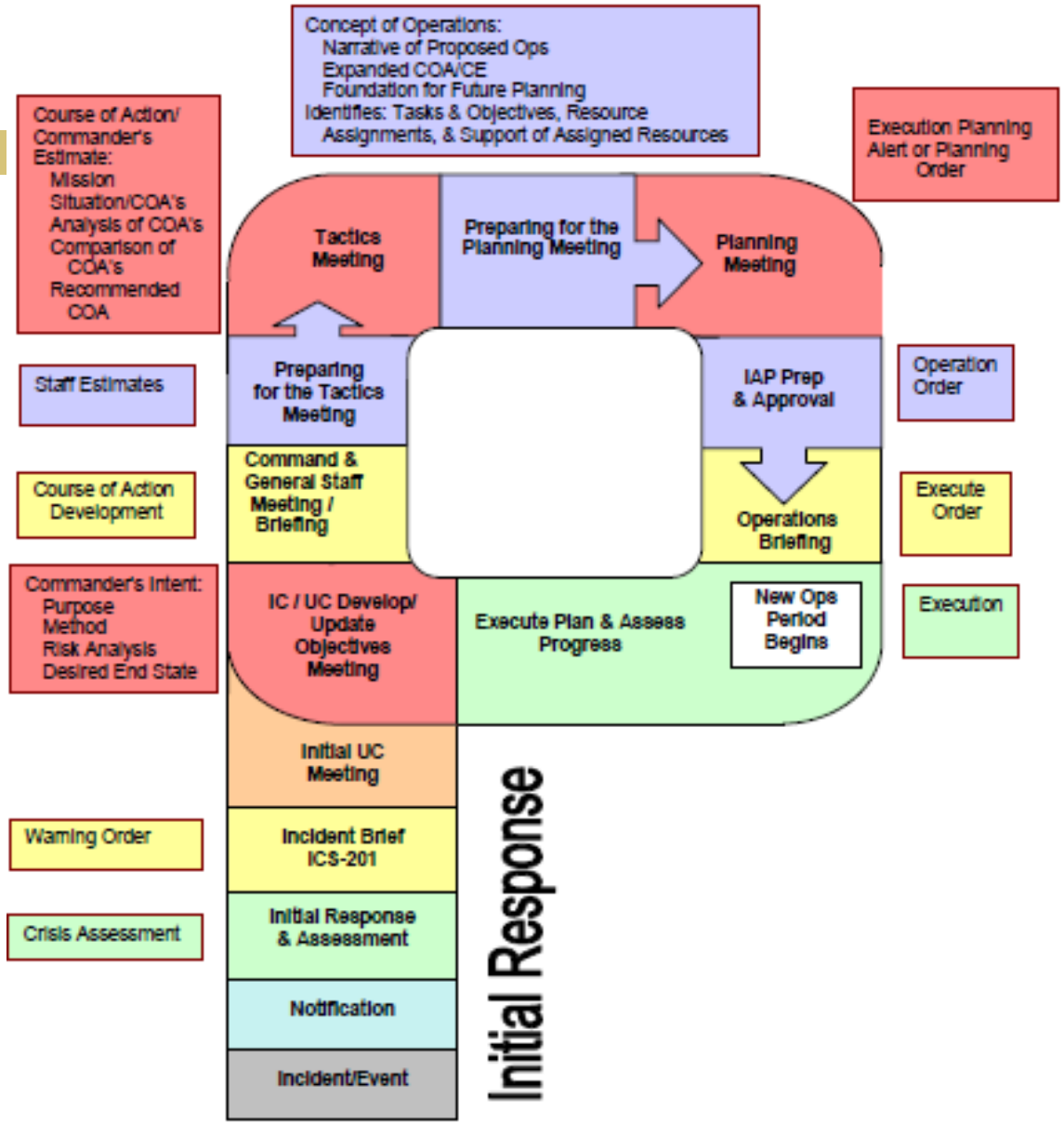
Garden City EOP Summary

- Meets the requirements of:
  - FEMA CPG 101 V.2
  - NFPA 1600
- All Hazard planning tool
- Incorporates elements and references of the USCG ACP, GEMA, (CEMA) plans
- Planning elements include risk assessment for climate change and sea level rise
- The plan is based on Best Practices planning and user simplification and use.



JOPES and ICS Interaction

Uses the Planning P model



The Responder Job Task Book

- Developed for ease of understanding
- Helps personnel assigned to command staff and general staff understand what their specific job entails.
- Plan is based on a progressive question approach that helps quantify the problem and the processes necessary to mitigate the problem effectively.
- Contains only job specific objectives.

Simplification Questions

- What is the problem?
  - This defines and describes the different problems weather event. This is the definition found in the EOP Supplemental description
- Where is the problem?
  - Contains a National Grid overlay map of the area. This begins the process of situational awareness. The employee also can plan their response to assigned Staging area.
- Where do I go to help solve the problem?
- What is my Job?
  - Includes a job specific description of what position the employee assumes during an event.
- What do I need to do my job?
- Who do I communicate with and how do I communicate?
  - This tells the employee what communications and provides a booklet with all of the necessary phone numbers, radio freq, and satellite phone numbers need.

E Plan – “the total picture”

- Each department head and employee are provided with a copy of the EOP (E-Plan) thumb drive.
- This is a hyperlinked plan that contains all of the forms and manuals needed to function in the event of a disaster.
- Virtual ECC allows Crisis team to operate independent of the situation

Questions / Discussion

- Ron Feldner, City of Garden City
  - rfeldner@gardencity-ga.gov
- Ed DiTommaso, Owner, Geo Rec
  - ed@georec.net
- Mike Godbold, City of Garden City
  - mgodbold@gardencity-ga.gov