

Socio-economic vulnerability of African Americans to hurricanes in the Gulf Coast of the United States

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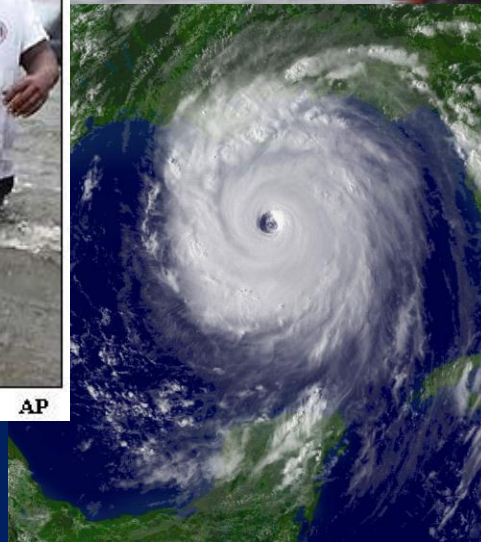
Background



- “1900” Hurricane- Killed 8,000-12,000
- Hurricane Katrina (2005)
- Hurricane Ike (2008)

Background

- African Americans are usually the hardest hit during hurricanes in the Gulf Coast region as evidenced by Hurricane Katrina in 2005, among others.



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Background

- Total African American population = 43.2 million (14.1% of the U.S. population)
- The GOM States have high percentages of African American population-

Mississippi- 37%

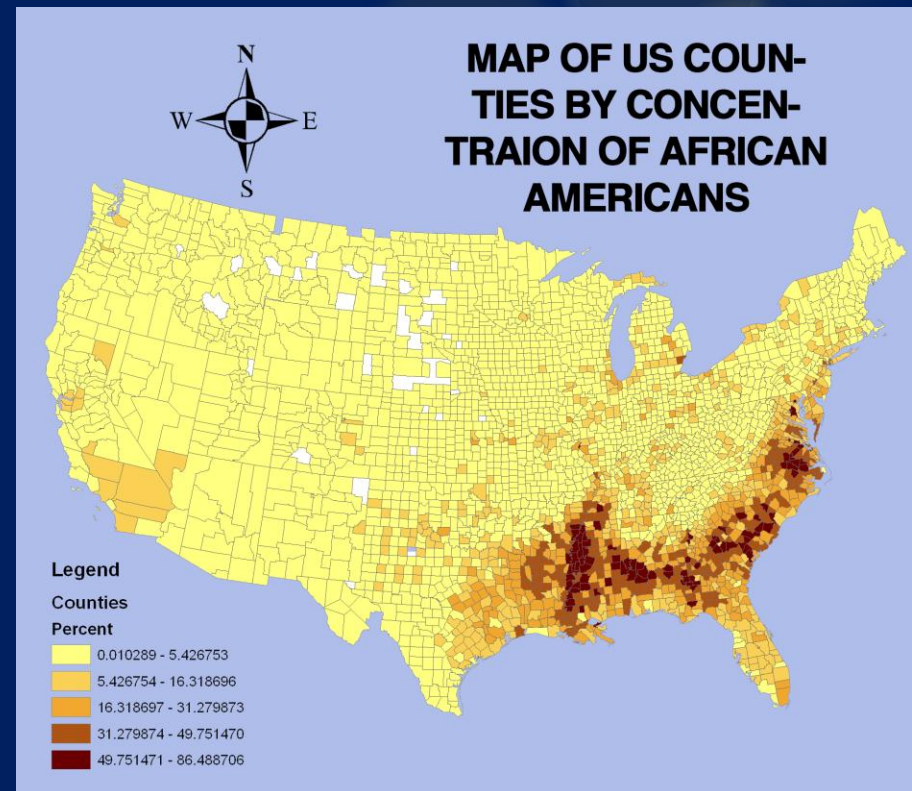
Louisiana- 32%

Alabama- 26%

Florida- 16%

Texas- 12%

(U.S. Census 2011)



Background

- Responses to natural disasters are highly influenced by social vulnerability.
- Studies on New Orleans after Hurricane Katrina found that most of the affected African Americans were low income, less educated, not married, older and home renters (Elder et al., 2007)

Socio-economic Vulnerability Factors

- Elderly Population (65+ years)
- Per Capita Income
- Level of Poverty
- Level of Education (at least high school)
- Marital Status

Study Area: Hurricane Risk Counties



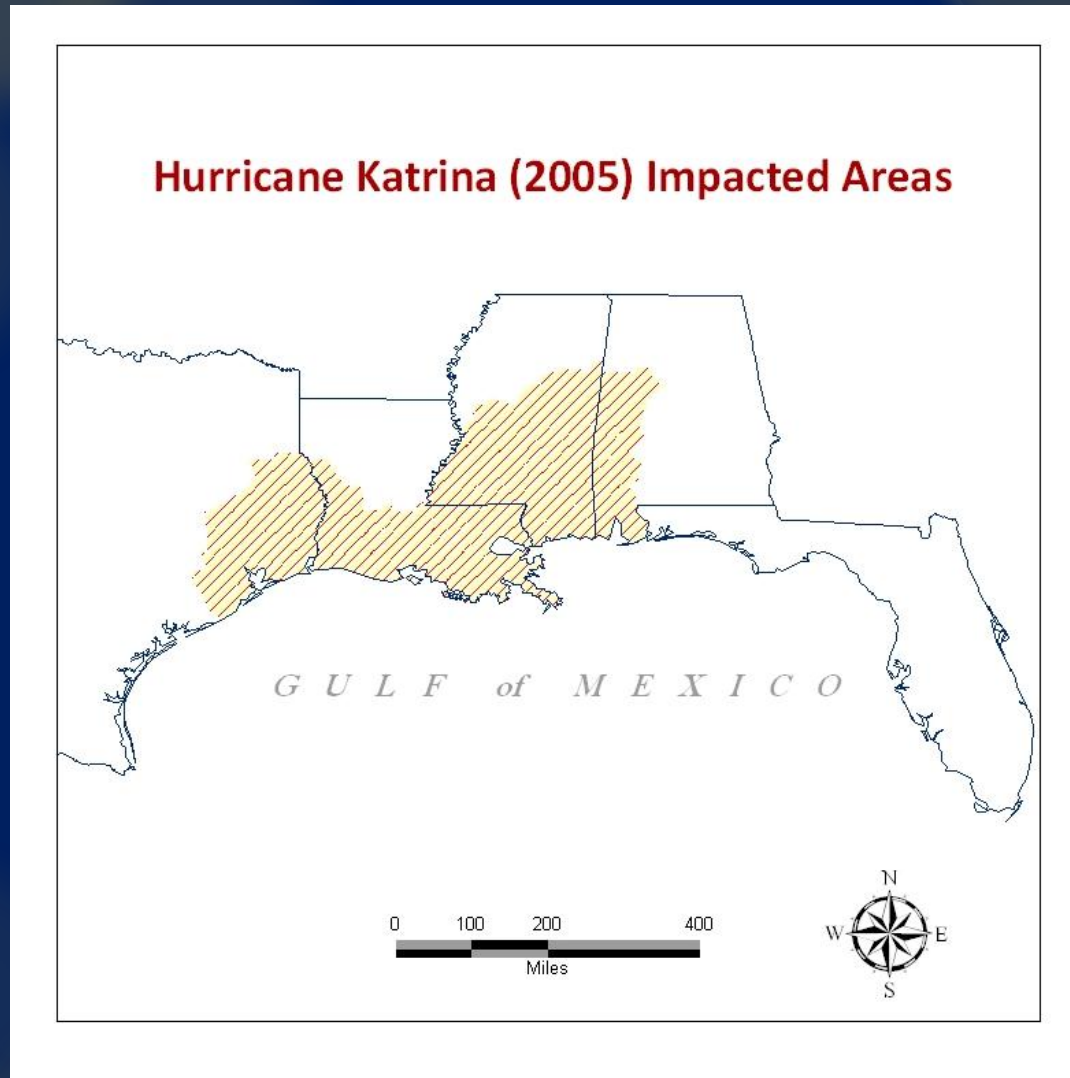
Combined Hazard

1. Hurricane Wind
2. Storm Surge
3. Coastal Flooding

Category

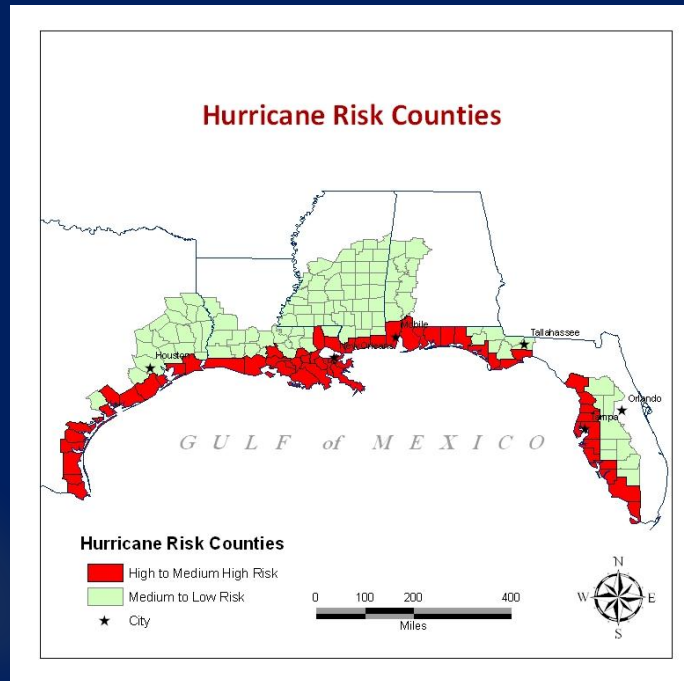
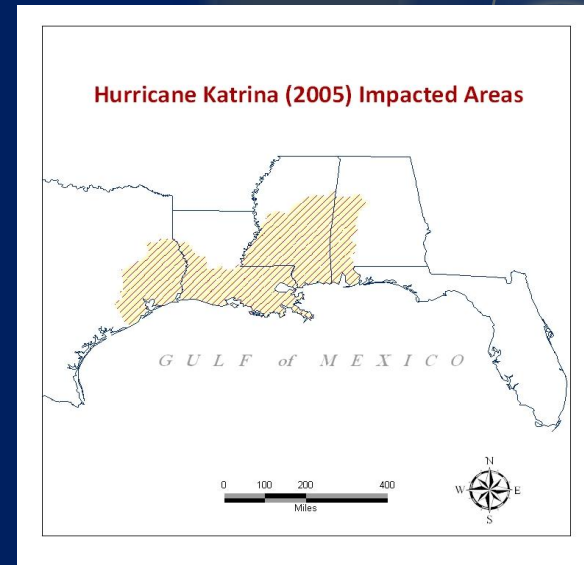
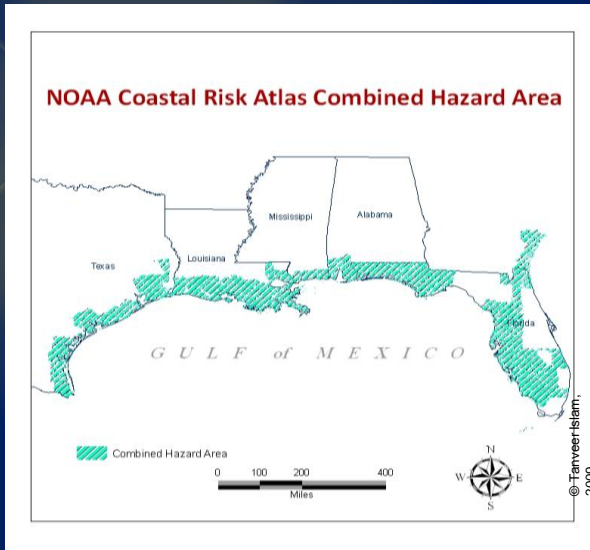
1. Low
2. Medium
3. Medium-High
4. High

Study Area: Hurricane Risk Counties



Source: U.S. Census Data on Hurricane Katrina

Study Area: Hurricane Risk Counties



Study Area: Hurricane Risk Counties

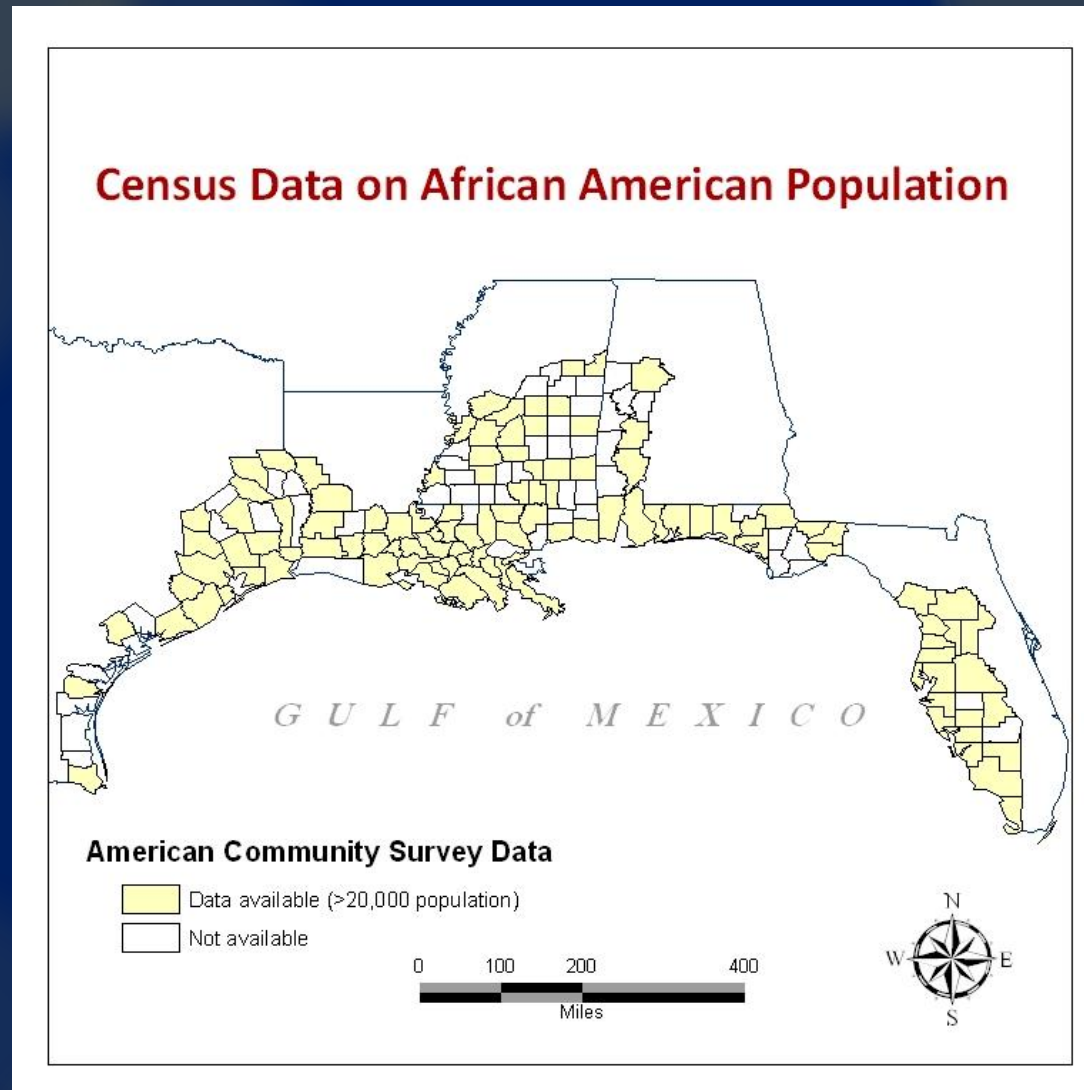


No. of Counties in High to Medium High Risk = 57

No. of Counties in Medium to Low Risk = 106

**Total= 163
counties**

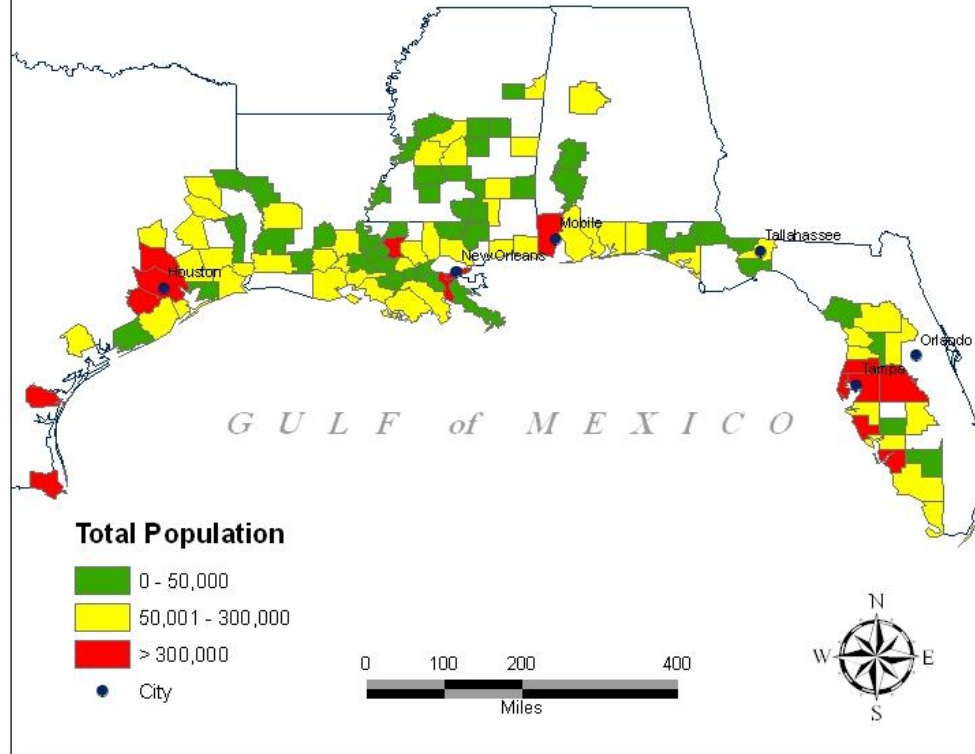
Study Area: Data on Population



Total 110
Counties

Source: ACS Data 2005-2007

Total Population

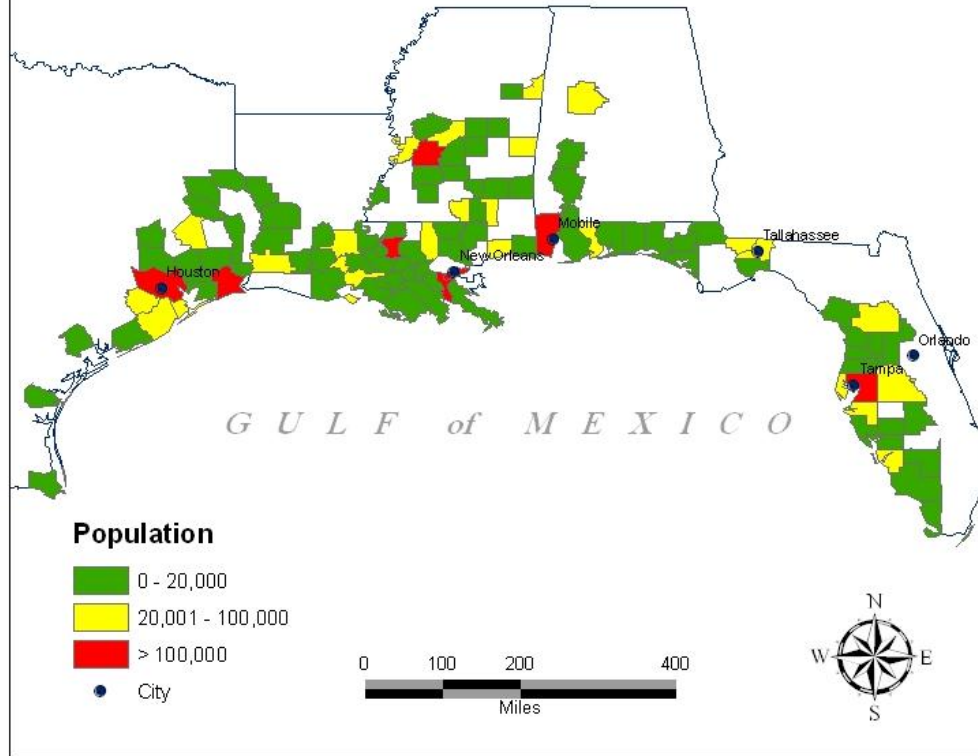


American Community Survey 2005-2007

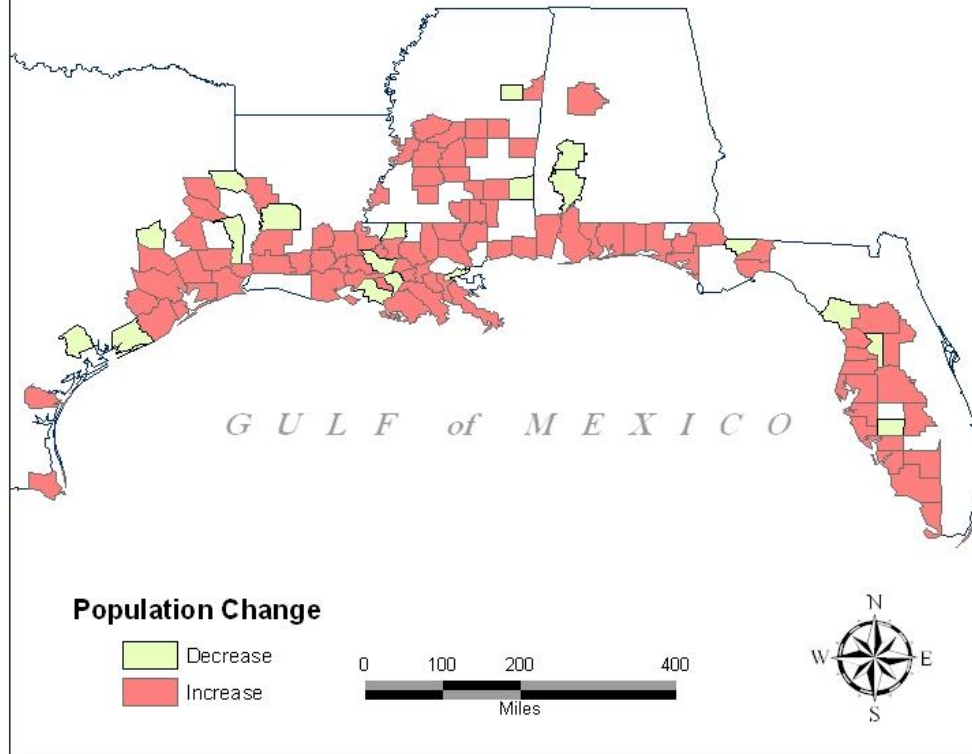
Total Population 19,830,517

Total African American Population 3,691,894 ~18.62%

African American Population (Census 2000)



African American Population Change Since Census 2000



Counties with Population Decrease

Florida

Gadsden

Levy

Sumter

De Soto

Alabama

Marengo

Clarke

Mississippi

Oktibbeha

Wayne

Louisiana

Vernon

East Feliciana

Iberville

Orleans

Assumption

St. Mary

Texas

Shelby

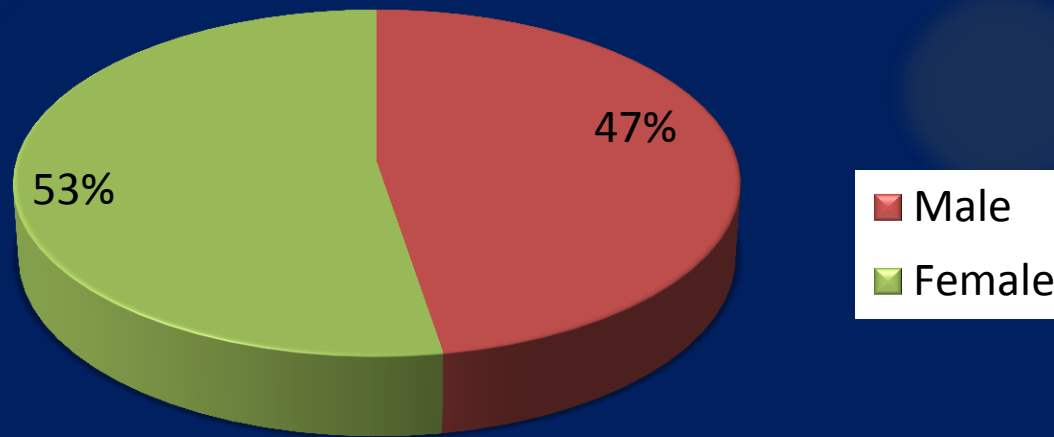
Jasper

Walker

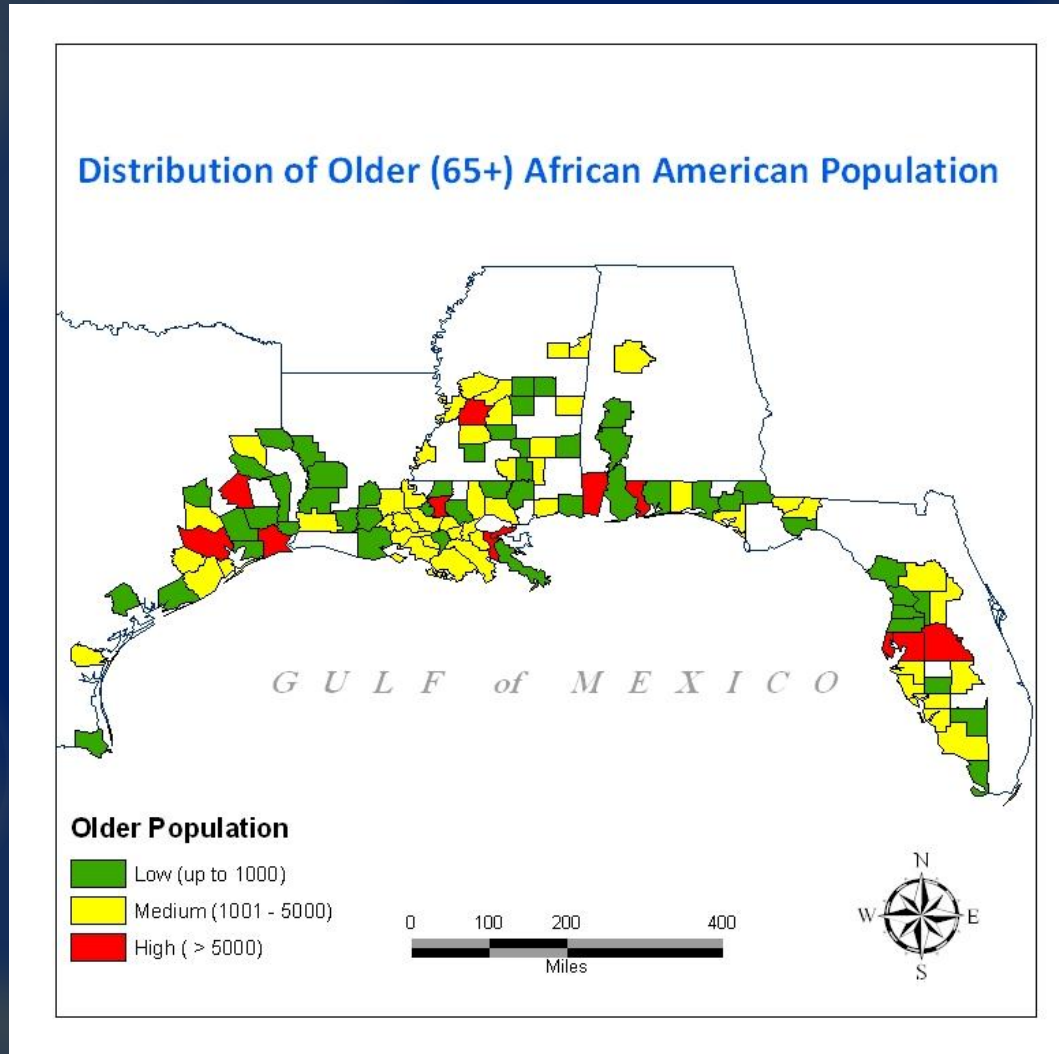
Matagorda

Victoria

Total Male/Female Distribution of African Americans in All Hurricane Risk Counties



Socio-economic Condition: Older Population



Counties with High (> 5000) Older population

Florida

Escambia

Hillsborough

Polk

Pinellas

Alabama

Mobile

Mississippi

Hinds

Louisiana

Orleans

East Baton Rouge

Jefferson

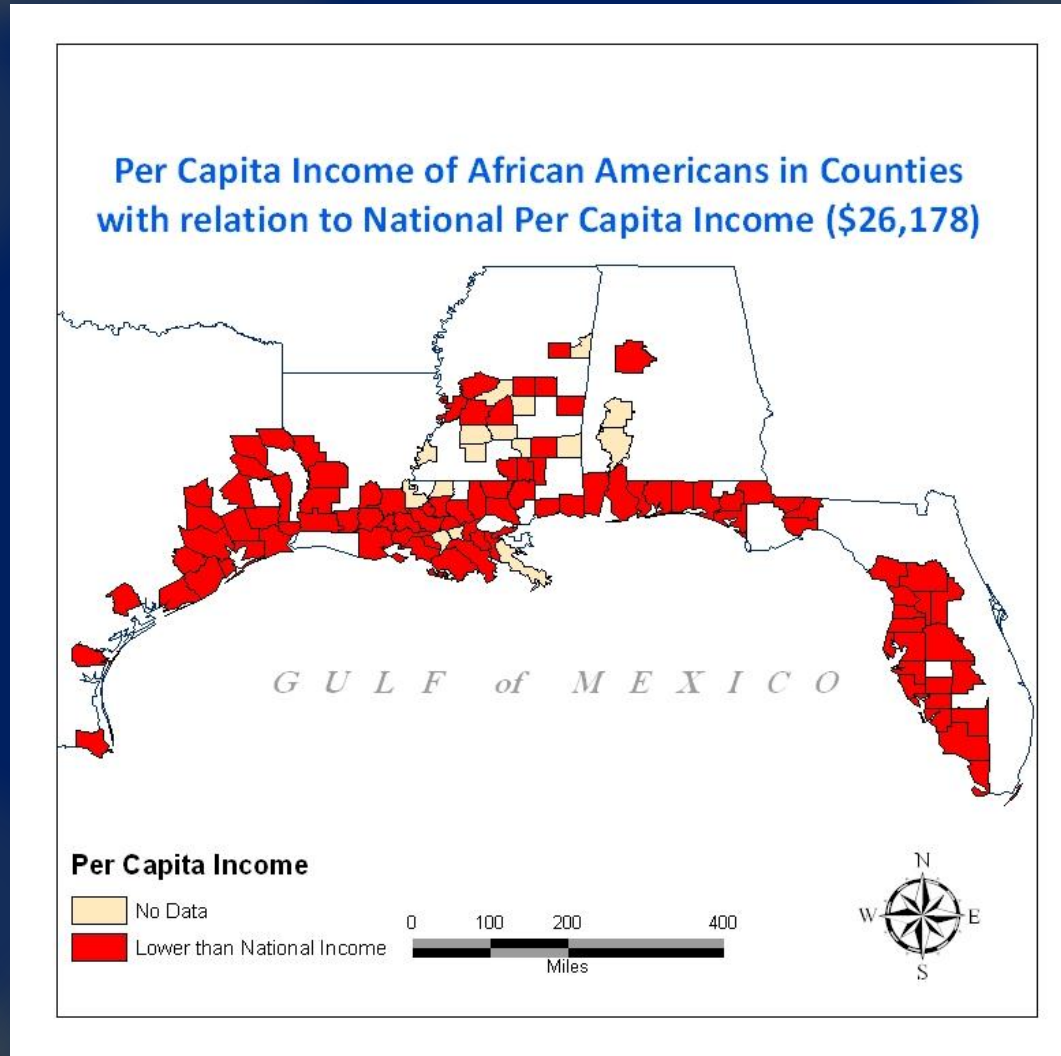
Texas

Harris

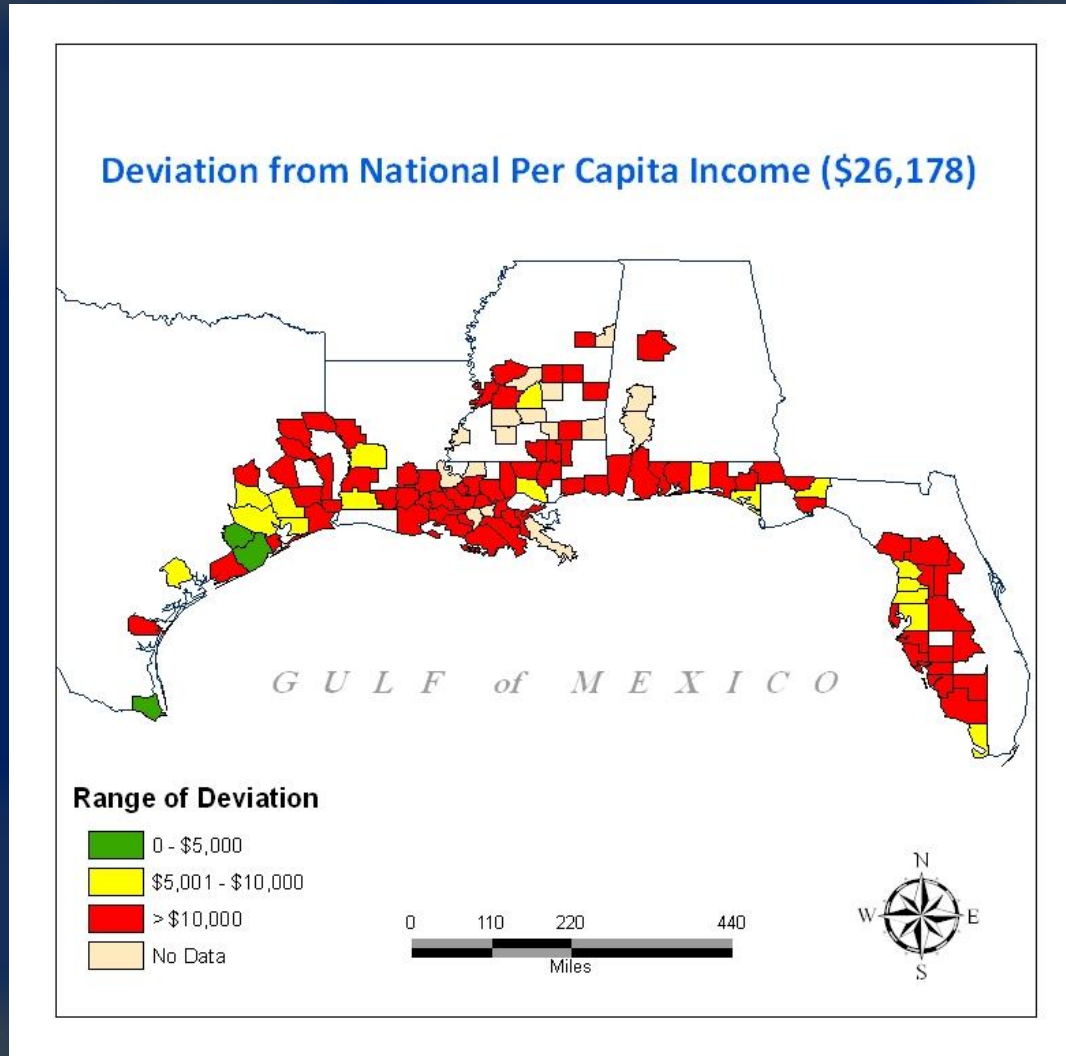
Jefferson

Polk

Socio-economic Condition: Per Capita Income



Socio-economic Condition: Per Capita Income



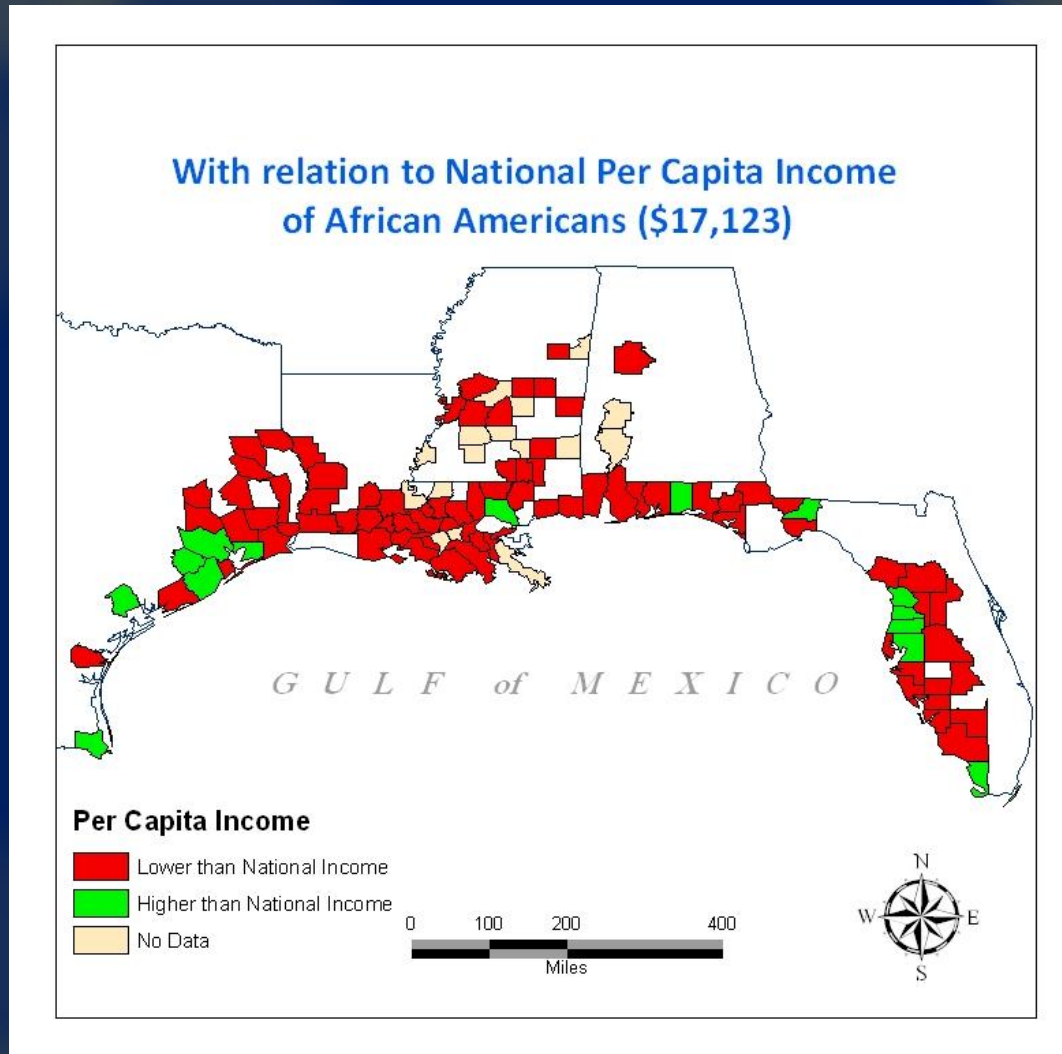
Texas

Brazoria

Cameron

Fort Bend

Socio-economic Condition: Per Capita Income



Counties with African Americans higher than black national income

Florida

- Leon
- Okaloosa
- Citrus
- Hernando
- Pasco
- Hillsborough
- Monroe

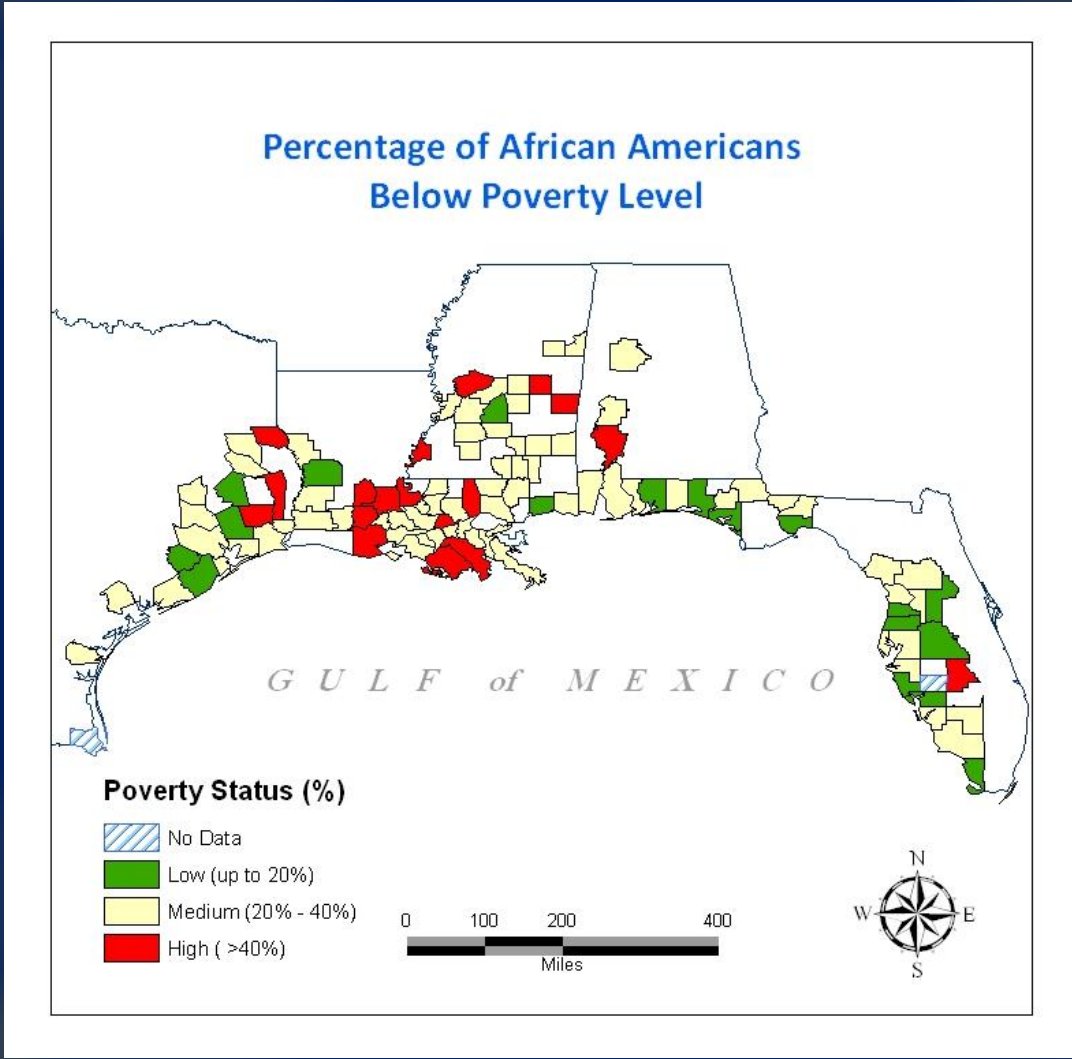
Louisiana

- St. Tammany

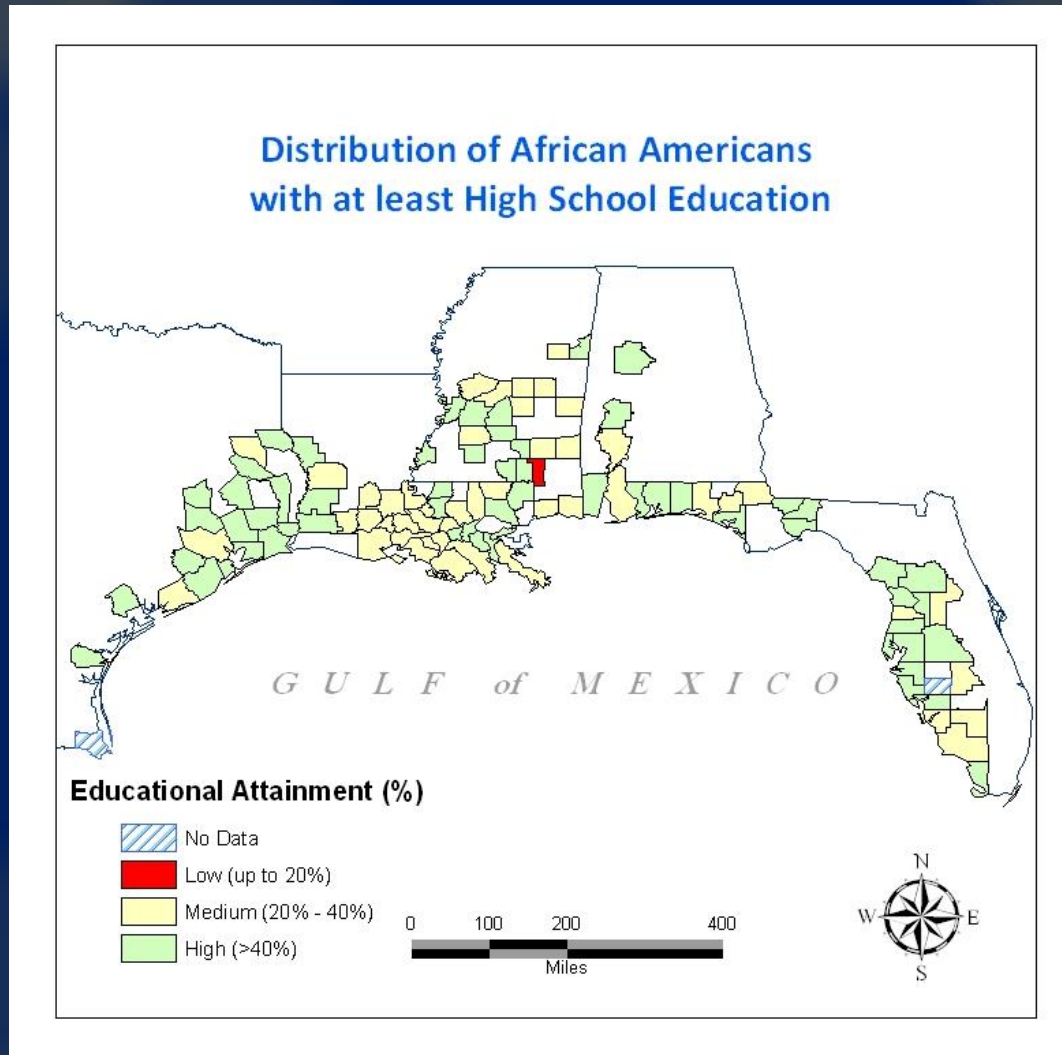
Texas

- Harris
- Chambers
- Fort Bend
- Brazoria
- Galveston
- Victoria
- Cameron

Socio-economic Condition: Level of Poverty



Socio-economic Condition: Education



In U.S. high school educational attainment is 84% (total; Age 25+)

Covington, MS - 91%

Citrus, FL - 59%

Victoria, TX - 57%

Sumter, FL - 56%

Fort Bend, TX - 52%

Okaloosa, FL - 51%

Galveston, TX - 50%

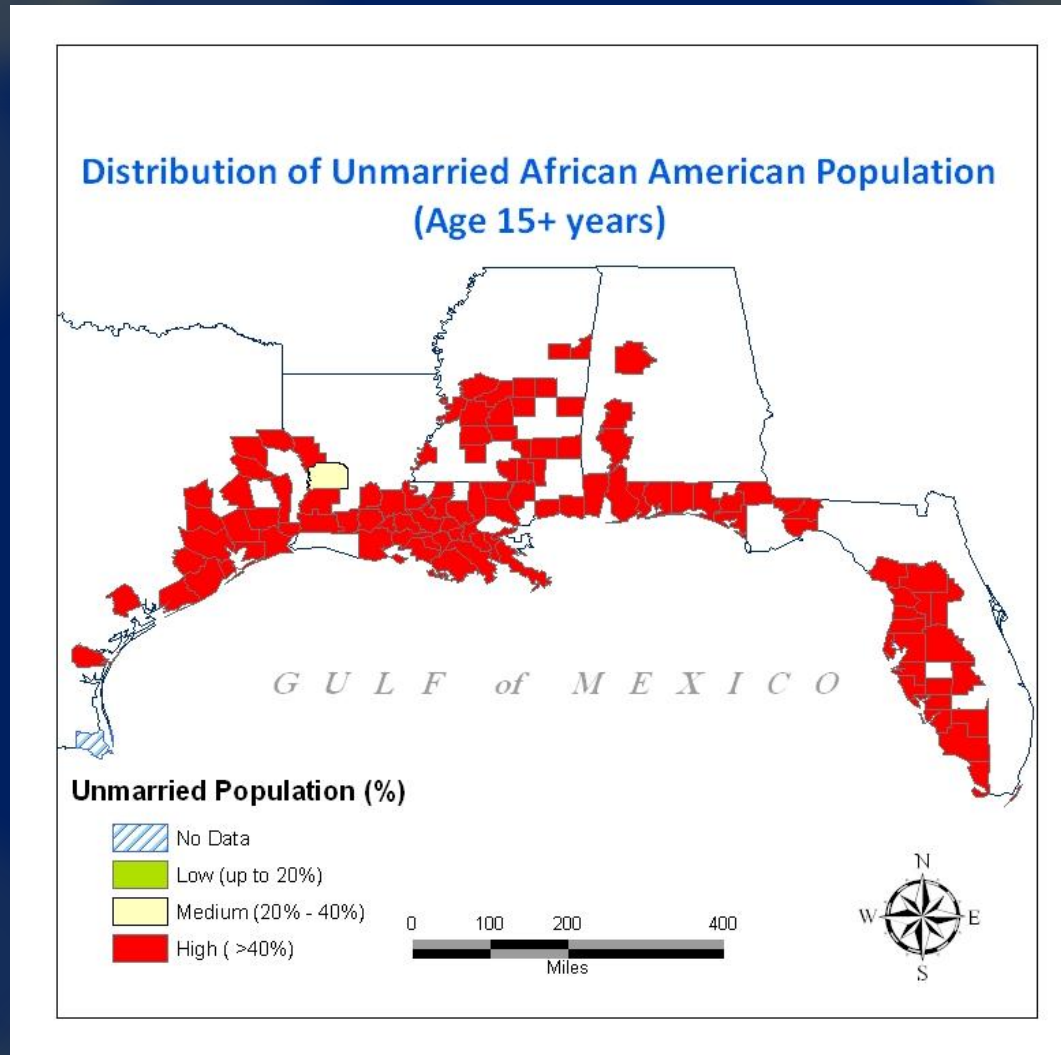
Walker, TX - 50%

Average - 40.65%

Mississippi

Forrest

Socio-economic Condition: Marital Status



Louisiana
Vernon

GIS visualization of combined socio-economic conditions and ranking of Hurricane Risk Counties

High **10**

Medium **5**

Low **1**

1. Hurricane Risk Areas (High-Medium high; Medium-Low)
2. Percentage of African American Population (High/Medium/Low)
3. Number of Older African American Population (High/Medium/Low)
4. Per capita income of African Americans with deviation from National Income (High/Medium/Low)
5. Percentage of African Americans below poverty level (High/Medium/Low)
6. Percentage of African Americans with at least high school education (High/Medium/Low)
7. Percentage of unmarried African American population (High/Medium/Low)

Example

For Escambia County, FL

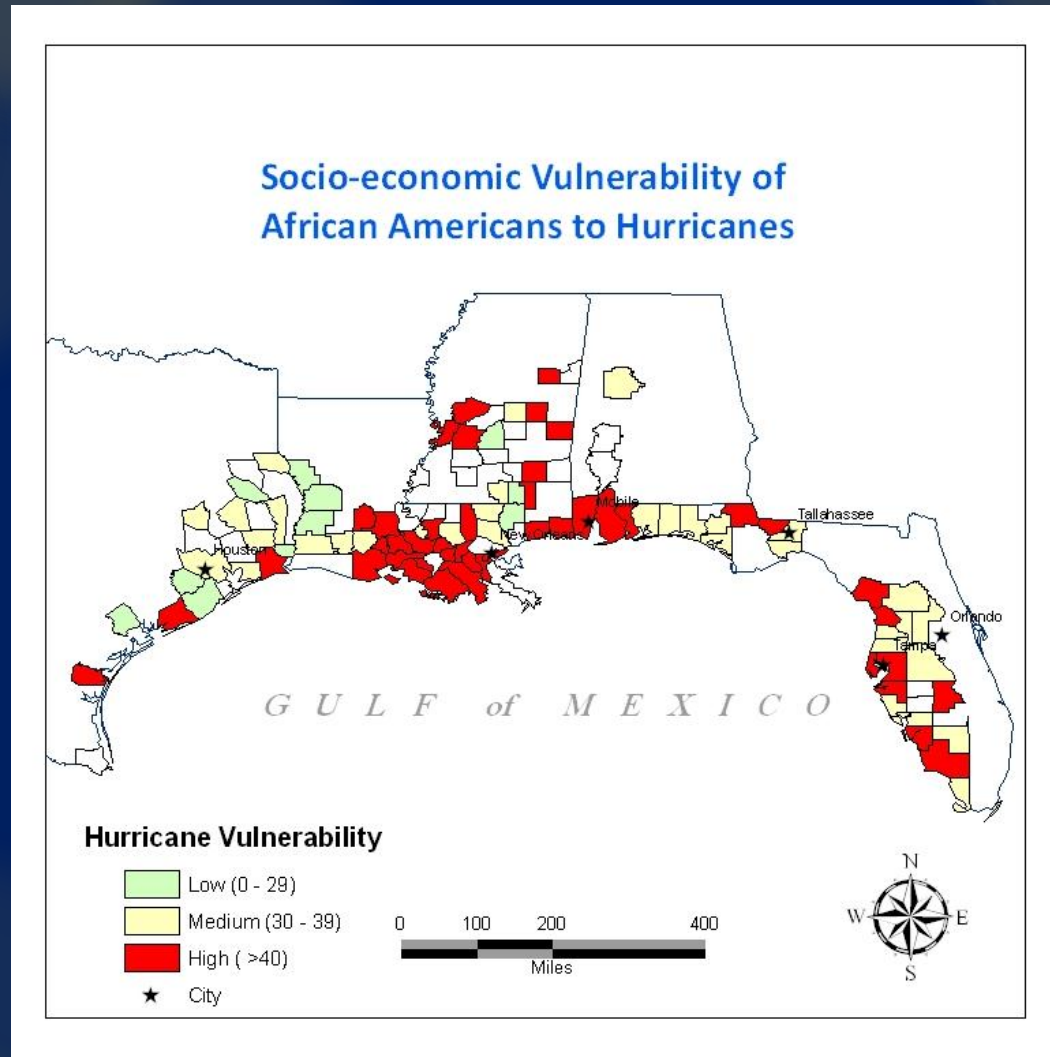
1. Hurricane Risk Areas (High-Medium High: 10)
2. Percentage of African American Population (Medium: 5)
3. Number of Older African American Population (High: 10)
4. Per capita income of African Americans with deviation from National Income (High: 10)
5. Percentage of African Americans below poverty level (Medium: 5)
6. Percentage of African Americans with at least high school education (High/Low: 1)
7. Percentage of unmarried African American population (High: 10)

Total points = 51

Ranking

Rank	County	State	Value
1	Orleans	Louisiana	56
2	Ascension	Louisiana	55
3	Tangipahoa	Louisiana	55
4	Mobile	Alabama	51
5	Escambia	Florida	51
6	Jefferson	Louisiana	51
7	Lafourche	Louisiana	51
8	St. John the Baptist	Louisiana	51
9	St. Landry	Louisiana	51
10	Terrebonne	Louisiana	51

Socio-economic Vulnerability to Hurricanes



High vulnerable counties

Value ≥ 40 ; Total = 43

Florida

Jackson, Gadsden

Escambia, Levy

Citrus, Highlands

Manatee, Lee, Collier

Pinellas, Hillsborough

Alabama

Baldwin, Mobile

Mississippi

Oktibbeha, Hinds

Yazoo, Neshoba, Harrison

Warren, Lauderdale

Jones, Forrest, Jackson

Louisiana

Orleans, Tangipahoa, Iberia

East Baton Rouge, St. Mary

Jefferson, Evangeline

St. Landry, St. Martin

Iberville, Lafayette, SJTB

Ascension, St. James

Vermilion, St. Charles,

Lafourche, Terrebonne

Texas

Jefferson, Matagorda,

Nueces

Role of Historically Black Colleges and Universities (HBCUs)

- **Historically Black Colleges and Universities (HBCUs) were established as early as 1837 primarily with the purpose to provide “separate but equal” educational opportunities for the Black community.**
- **In 1992 Walter Allen identified six specific goals of HBCU’s-**

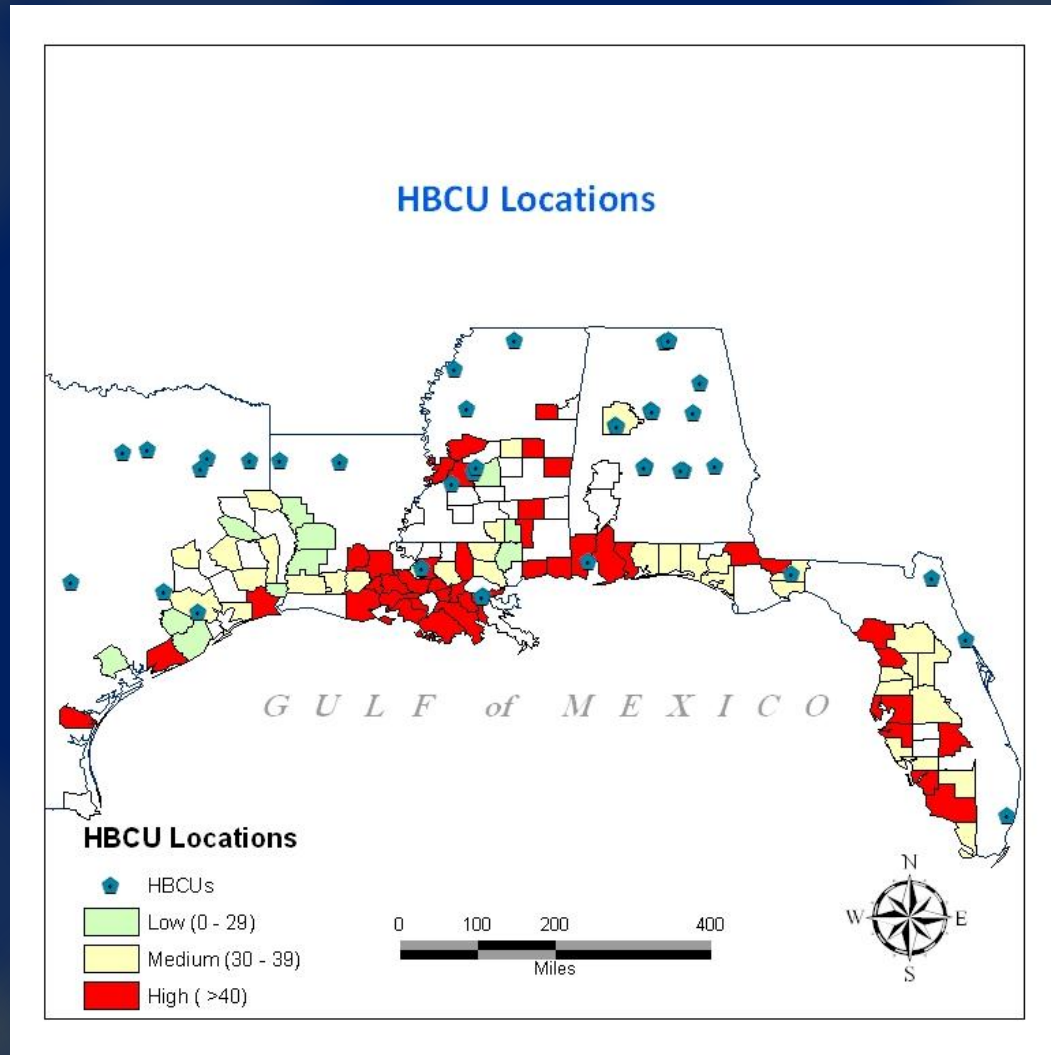
Role of Historically Black Colleges and Universities (HBCUs)

1. the maintenance of the Black historical and cultural tradition
2. the provision of key leadership for the Black community given the important social role of college administrators, scholars, and students in community affairs (i.e., the HBCU functions as a paragon of social organization);
3. the provision of an Economic function in the Black community
4. the provision of Black role models to interpret the way in which social, political, and economic dynamics impact Black people;
5. the provision of college graduates with a unique competence to address the issues between the minority and majority population groups; and
6. the production of Black agents for specialized research, institutional training, and information dissemination in dealing with the life environment of Black and other minority communities (Brown and Davis, 2009).

Role of Historically Black Colleges and Universities (HBCUs)

- **All these goals indicate that HBCUs are vehicles of change for the socio-economic conditions in surrounding Black communities.**
- **Considering that the majority of HBCUs are located in Southern States, it is meaningful to further consider the socio-economic condition of GOM sates in order to characterize specifically their social vulnerability to disasters and further to identify opportunities to improve these conditions.**

Location of HBCUs



Role of Historically Black Colleges and Universities (HBCUs)

- **Financial preparation of this and future generations of students**
- **Focused research on asset-building/disaster relief resiliency techniques specifically geared towards minority and low income communities**
- **Focused extension to minority and low income communities in close proximity**

Hurricane Preparedness Workshop- “Prepare Pensacola” in Escambia, FL

- The Gulf of Mexico Alliance (GOMA)
- Be Ready Alliance Coordinating for Emergencies (BRACE)
- Southern Regional Asset Building Coalition
- The Little Rock Baptist Church



PREPARE PENSACOLA A WORKSHOP ON HURRICANE PREPAREDNESS

November 6, 2010

9 am – 3 pm *(lunch will be provided on site)*

Auditorium, Greater Little Rock Baptist Church

901 N. "A" Street, Pensacola, FL 32501



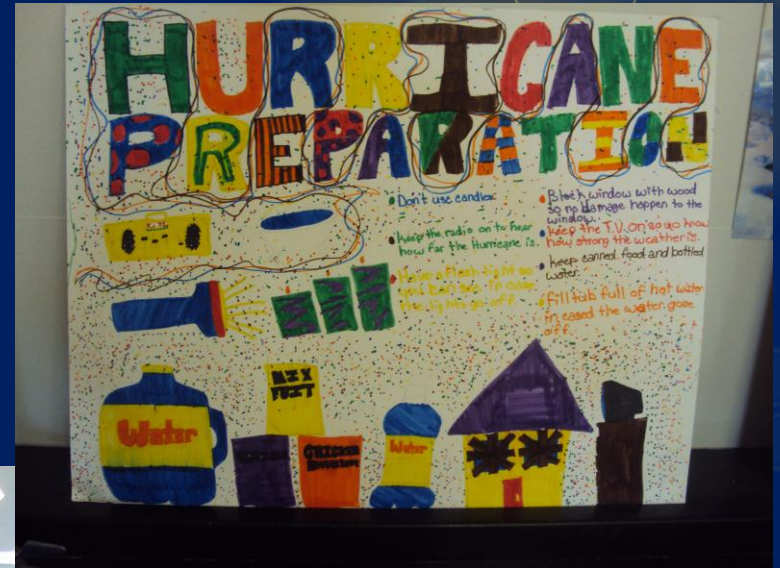
For more information, please contact: brace@bereadyalliance.org

Phone: (850) 444-7135; (850) 561-2128

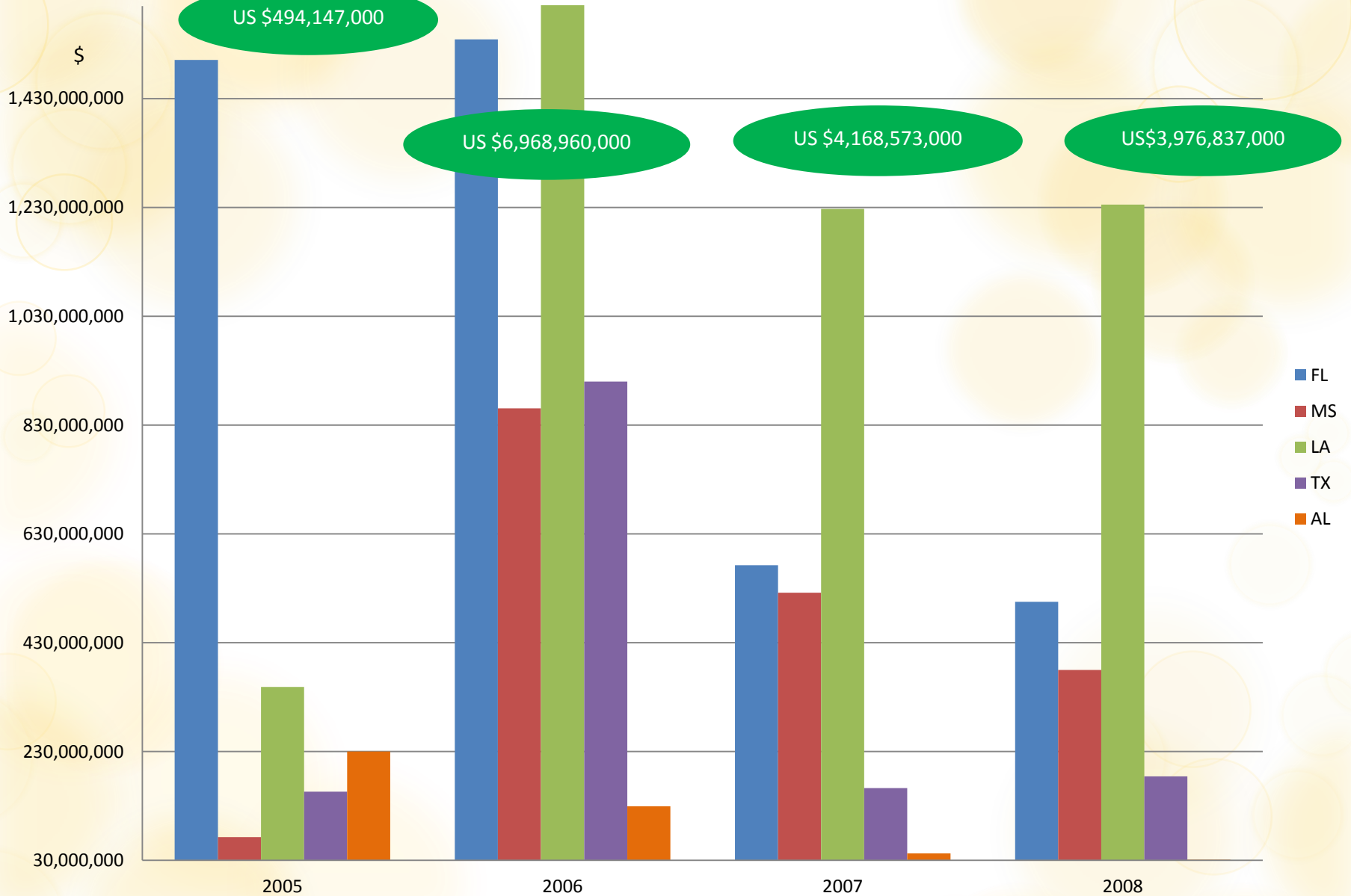
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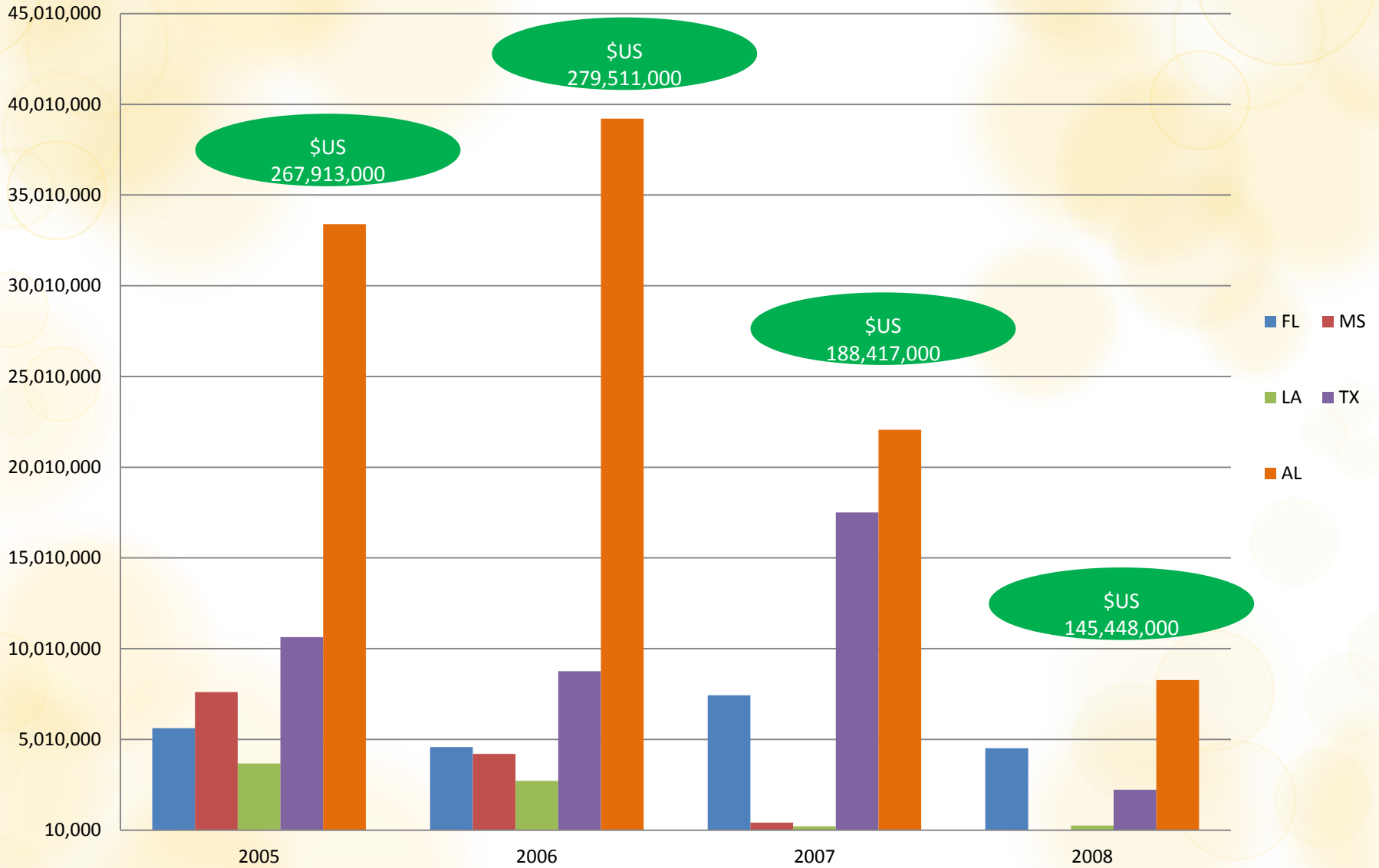
Hurricane Preparedness Poster Competition



FEMA Federal Aid to States : Disaster Relief



FEMA Federal Aid to States:Emergency Management Planning and Assistance



Thank you!
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