

# Social & Economic Impact

## Understanding Sea Level Rise Beyond Infrastructure

1:00-2:00 p.m. June 14, 2019, Jeffrey Ryan, Manatee County Government



# Agenda

About the  
Analysis

Demographics

Housing

Economy

DIY

Discussion

# About the Analysis



- Data is presented by sea level rise (SLR) scenario
- Findings are a snapshot of current conditions and *are not* based on projections
- The American Community Survey is a supplemental estimate that takes place annually between census years.
- ACS is estimative
- ESRI makes estimates about areas not neatly within census block boundaries
- Some numbers might not match your numbers because of the way ESRI analyzes data

# About the Timeline

- Timelines vary
- Worst case scenarios indicate 6ft SLR occurring around 2100
- Measuring social impacts of sea level rise is different than measuring impacts on infrastructure
- Social impacts of 1 ft SLR could still impact residents living in a different sea level rise scenario.
- Our goal is to understand the broader social impacts caused SLR scenarios, and not the timing.

Year	NOAA Low (Feet)	NOAA Intermediate-Low (Feet)	NOAA Intermediate-High (Feet)	NOAA High (Feet)
1992	0.00	0.00	0.00	0.00
2025	0.28	0.38	0.60	0.84
2035	0.37	0.53	0.90	1.31
2050	0.50	0.80	1.46	2.22
2065	0.63	1.10	2.15	3.35
2075	0.71	1.33	2.68	4.23
2100	0.93	1.97	4.26	6.89

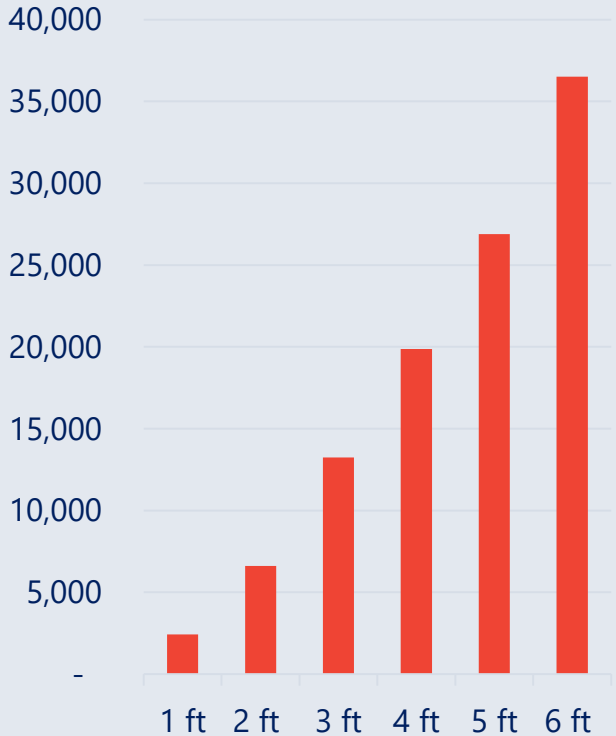


# demographics

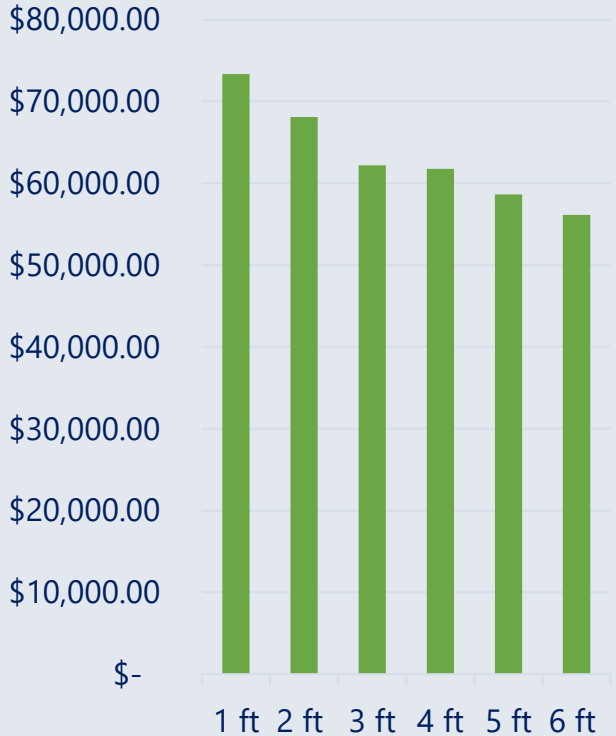
Understanding the population directly\* impacted by SLR. This level of analysis does not include indirect impacts of SLR.

# Population Impacted

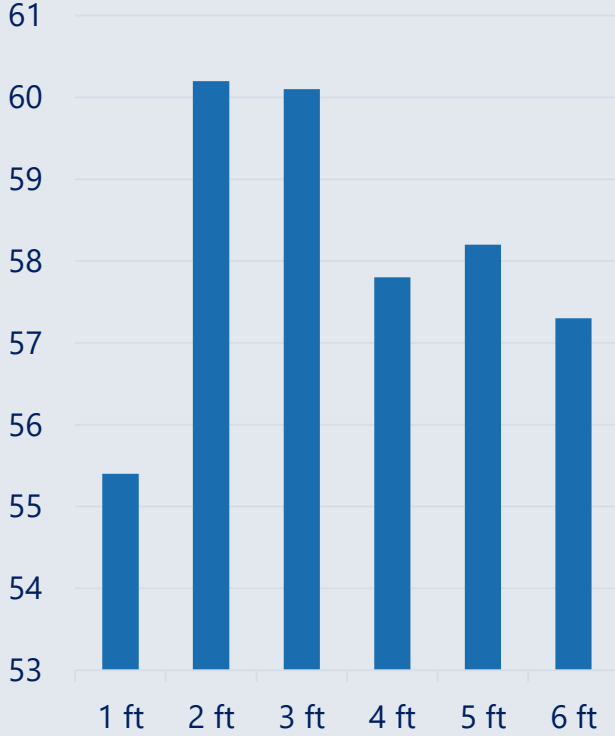
## Total Population



## Median Household Income



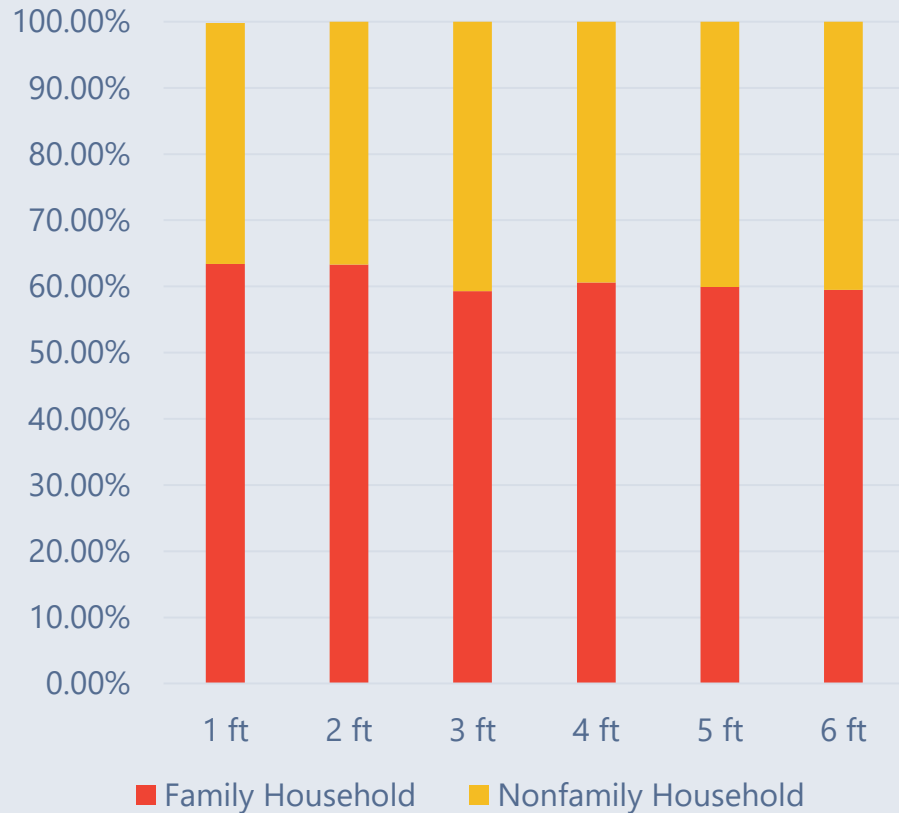
## Median Age



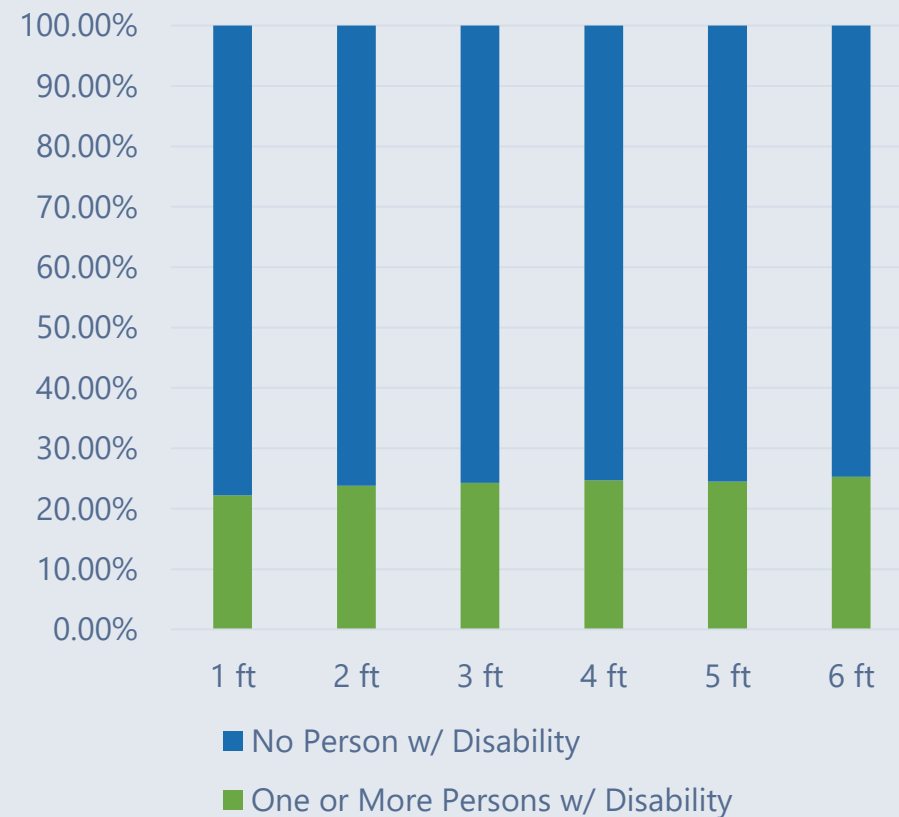
U.S. Census Bureau, American Community Survey Estimates (2017); ESRI Community Analyst (Accessed 2019).

# Household Types

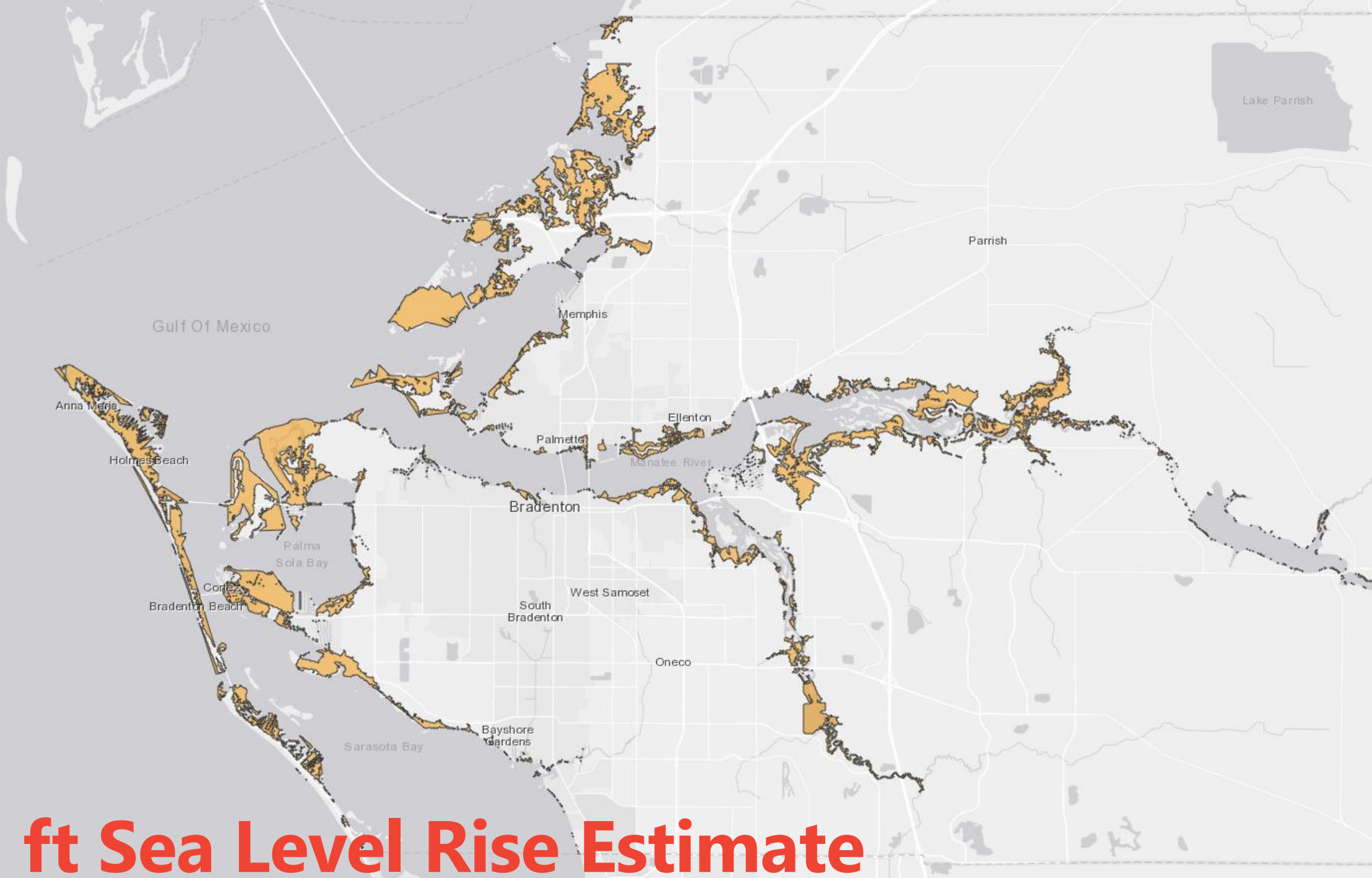
## Family Households



## Households With a Disability



# 3 ft Sea Level Rise Estimate





# Income as a Ratio of Poverty Level

**3.8%**  
Under .5

Almost 4% make an income under 50% of the poverty level.

**3.6%**  
1 to 1.24

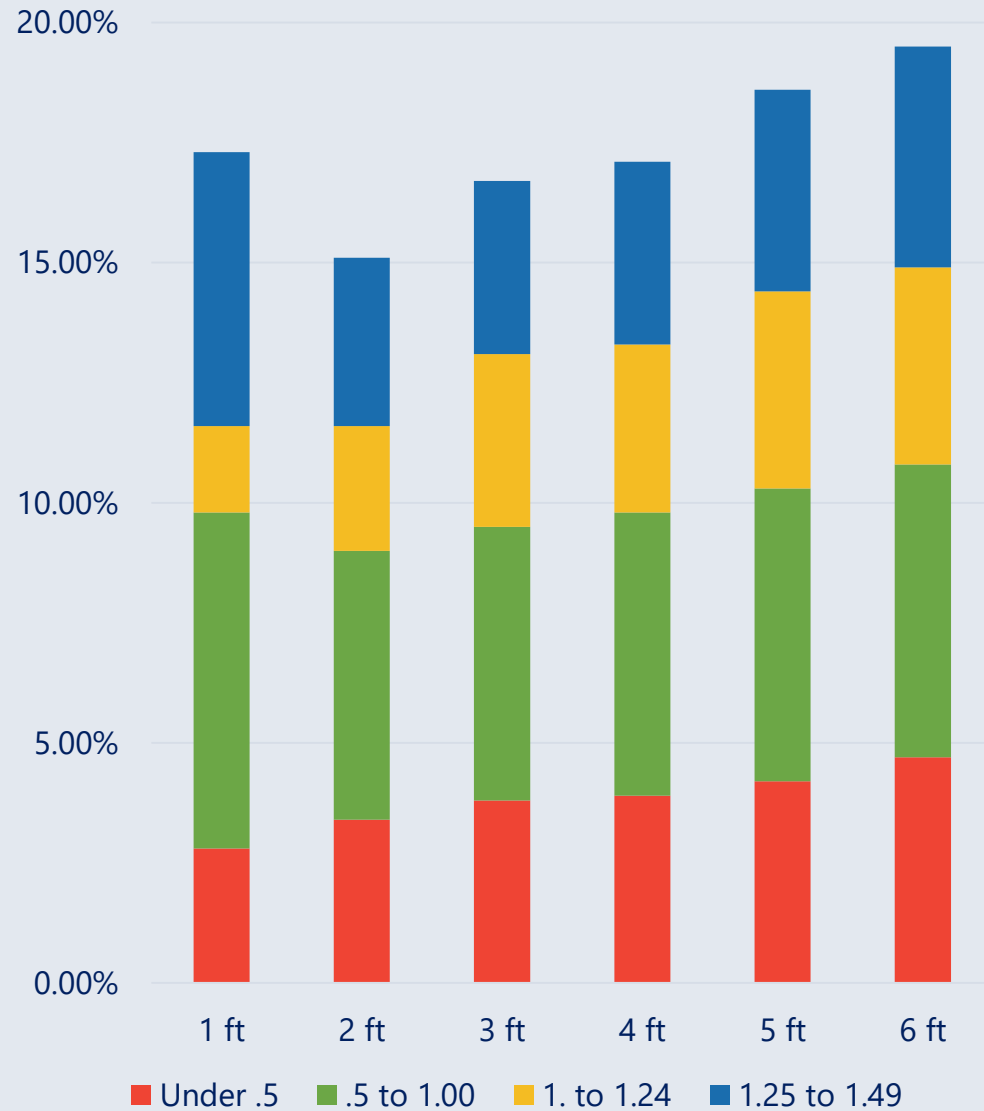
Almost 4% make an income at or 25% above the poverty level.

**5.7%**  
.5 to 1

About 6% make an income between 50% and 100% of poverty level.

**3.6%**  
1.25 to 1.49

Almost 4% make an income 25-50% over the poverty level.



U.S. Census Bureau, American Community Survey Estimates (2017); ESRI Community Analyst (Accessed 2019).

# Population 25+ By Education Attainment

**6.1%**  
No Diploma

6% of the population have less than a High School Education.

**25.6%**  
HS Diploma or GED

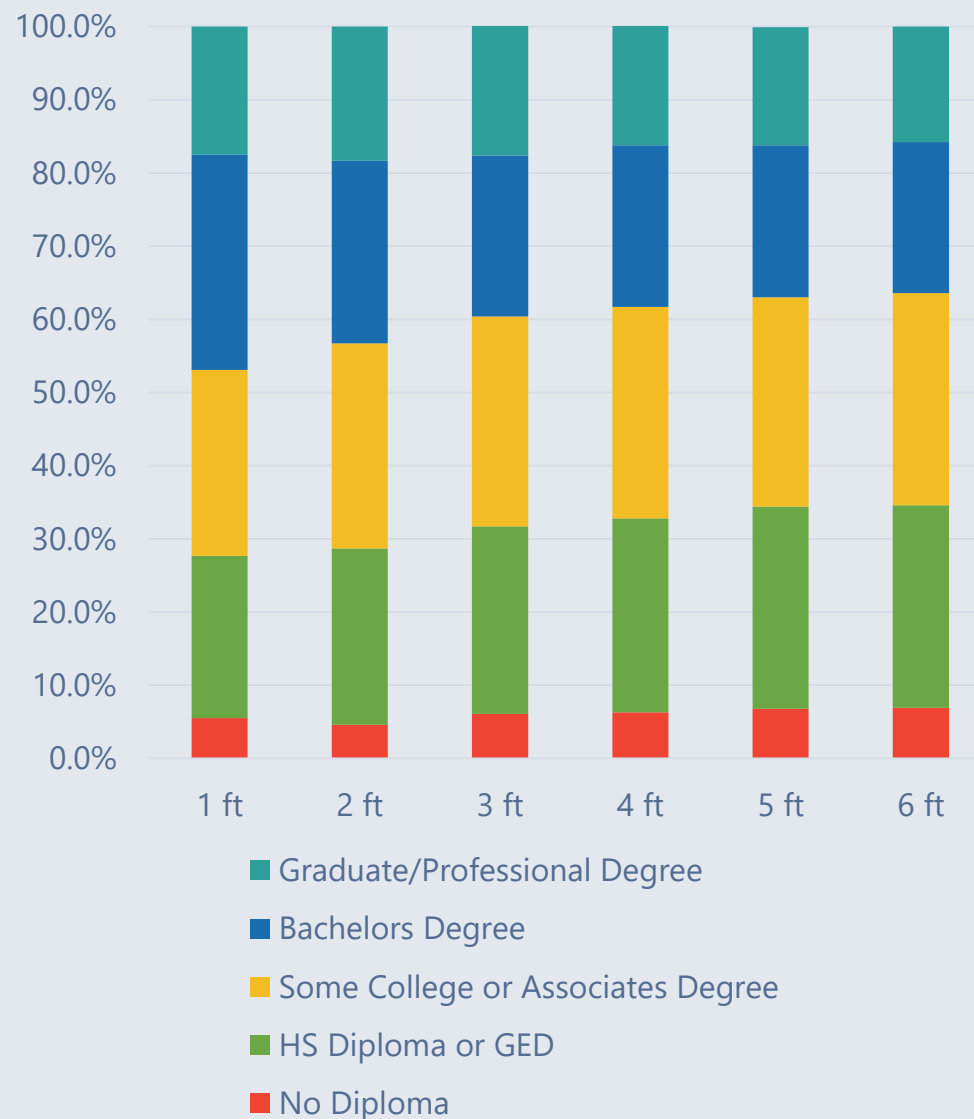
About 25.6% have a only a High School Diploma or GED.

**22%**  
Bachelor's Degree

22% have a bachelor's degree

**17.7%**  
Graduate Degree

Almost 18% have a graduate or professional degree.



# Non-White Population by Race/Ethnicity

**3.5%**  
Black Alone

3.5% of the population identified as Black.

**2.5%**  
Some Other Race Alone

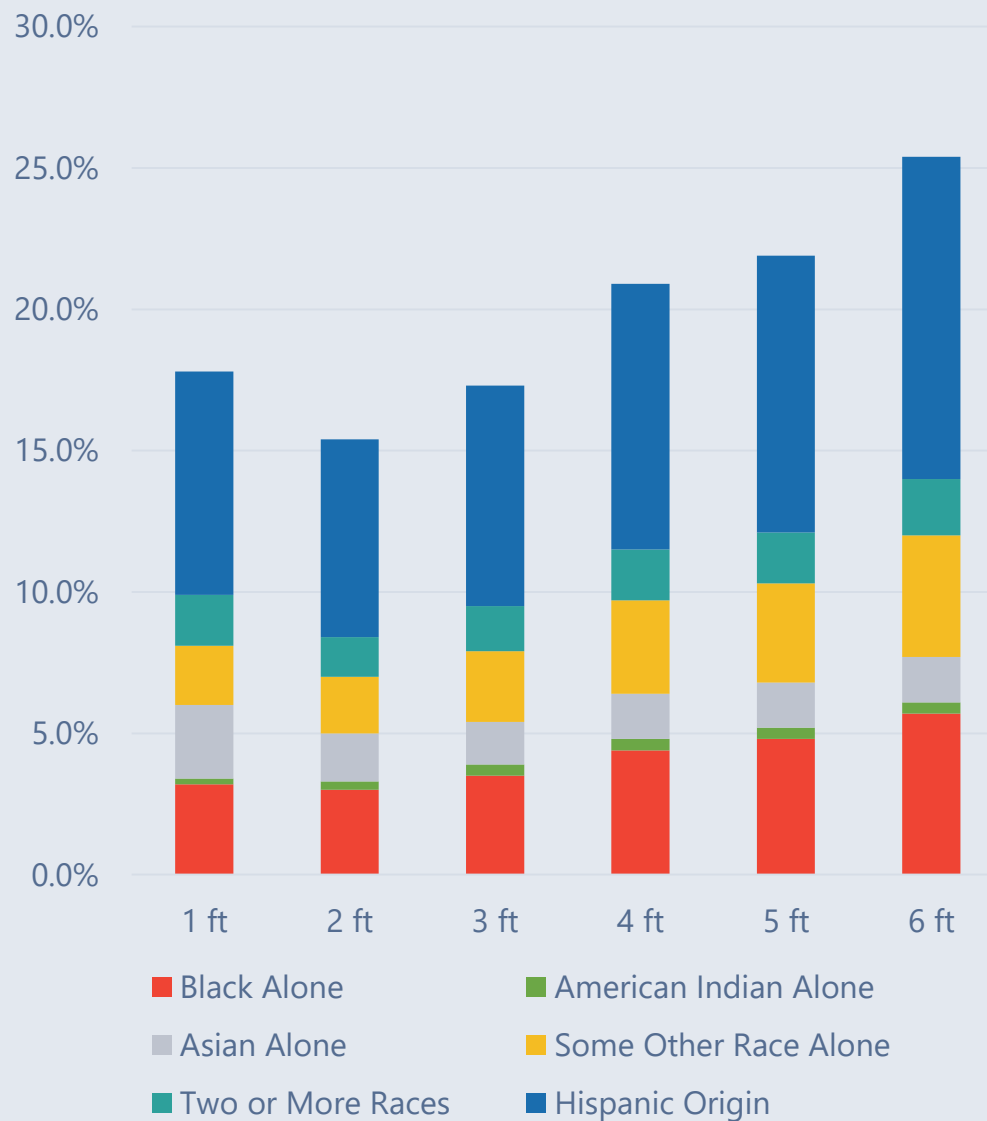
2.5% identified as some other race alone

**1.6%**  
Two or More Races

1.6% identified as two or more races.

**7.8%**  
Hispanic Origin

Roughly 8% identified as being of Hispanic origin.



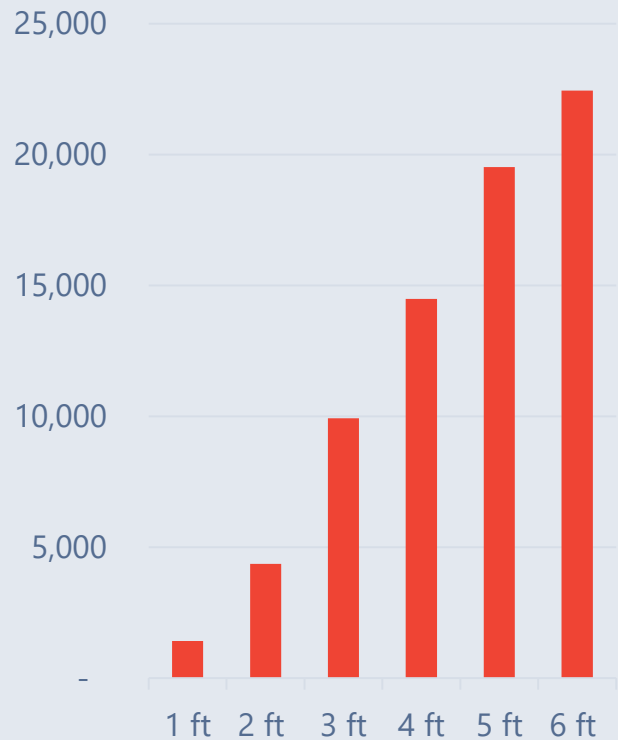


# housing

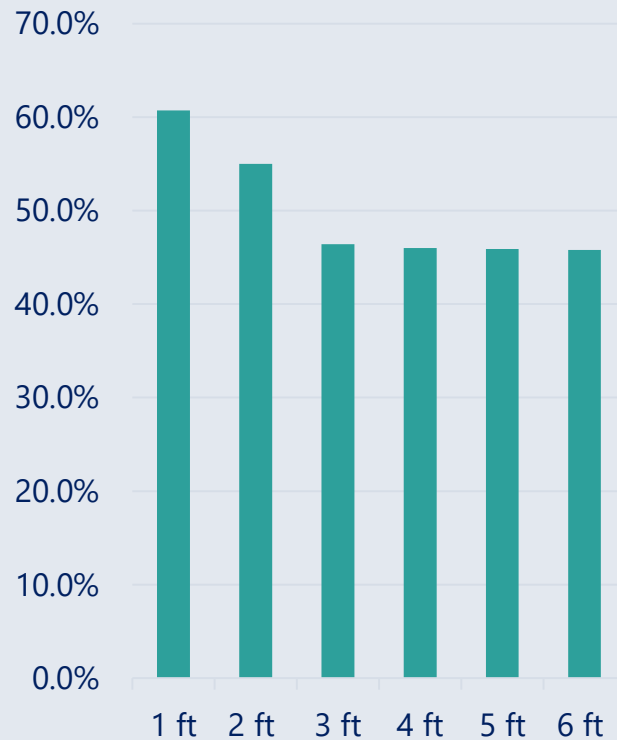
Understanding how many and what types of housing will be threatened by SLR

# Housing Snapshot

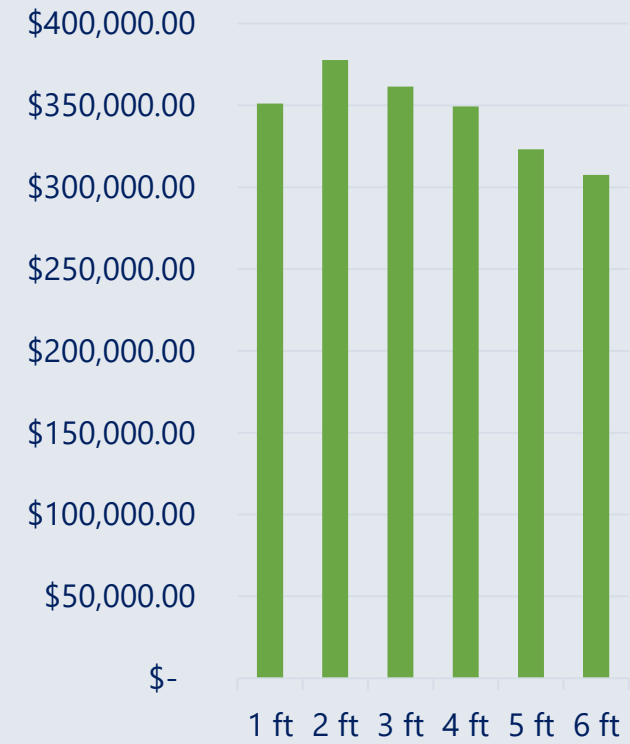
## Housing Units



## Owner Occupied Rate

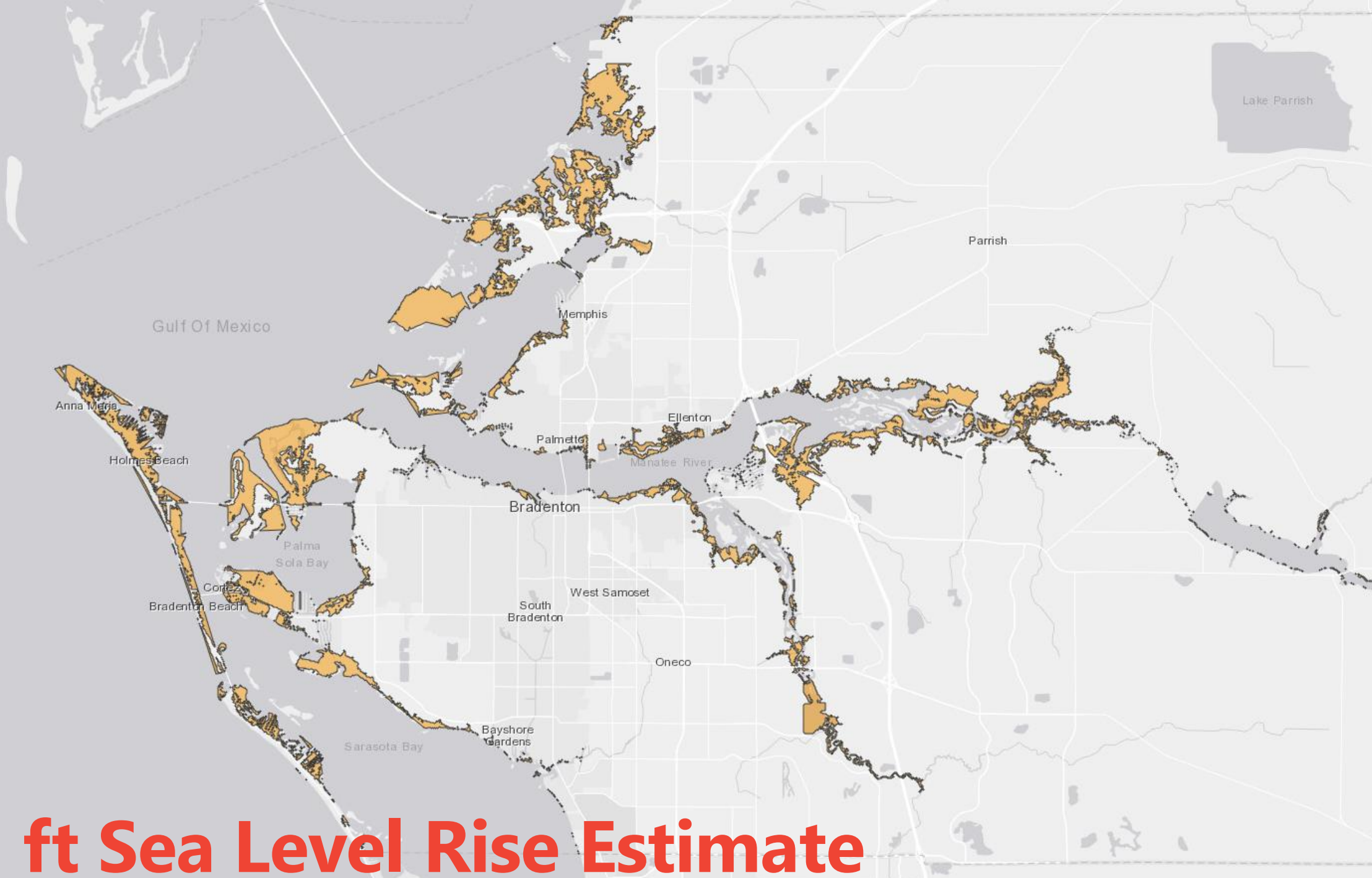


## Median Home Value



U.S. Census Bureau, American Community Survey Estimates (2017); ESRI Community Analyst (Accessed 2019).

# 3 ft Sea Level Rise Estimate



# Gross Rent as a Percentage of Household Income

**35.3%**  
 > 30% of Income

About 35 percent pay less than 30% of their household income on rent.

**17.4%**  
 40 to 50% of Income

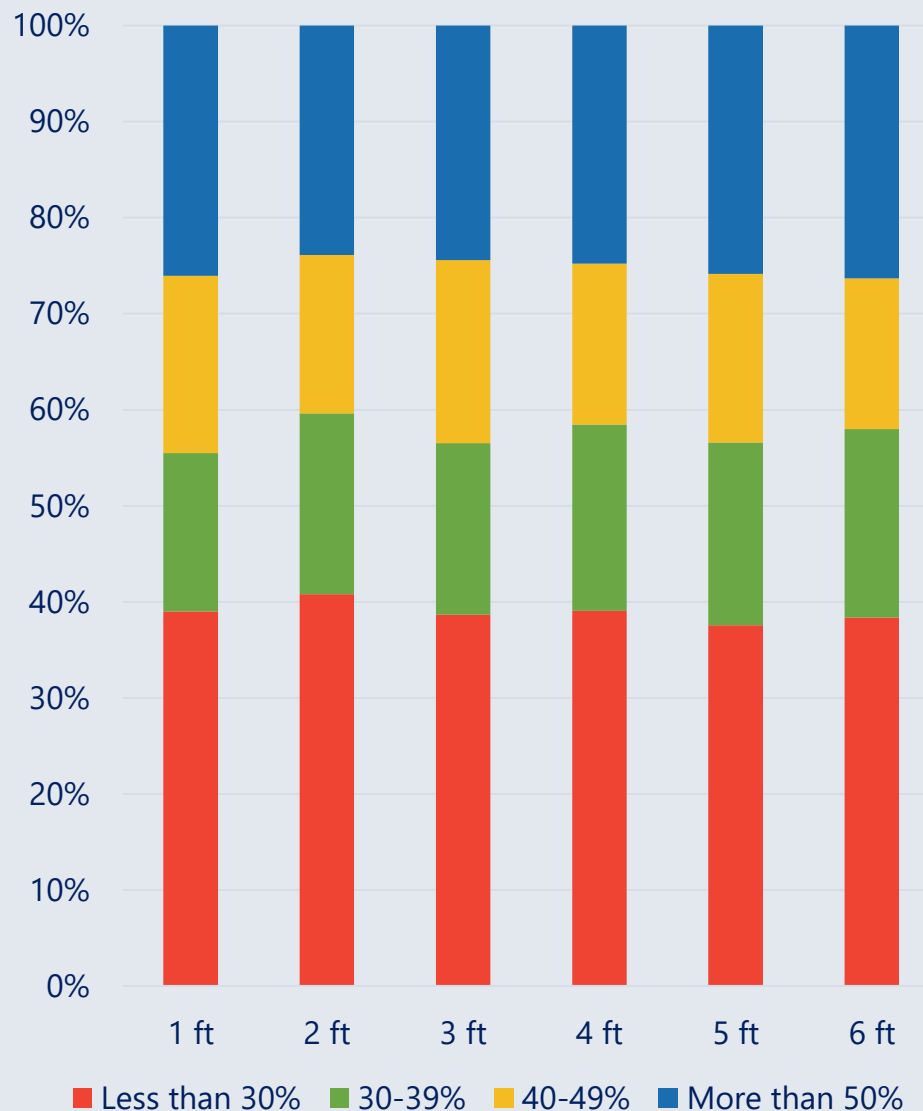
About 17% pay 40 to 50% of their household income on rent.

**16.3%**  
 30 to 39% of Income

16% pay 30 to 39% of their household income on rent.

**22.3%**  
 > 50% of Income

22% pay more than half of their household income on rent.



# Housing Types

**54.7%**  
Single Unit

Over half of all homes were attached or detached single unit homes.

**13.2%**  
More than 10 Units

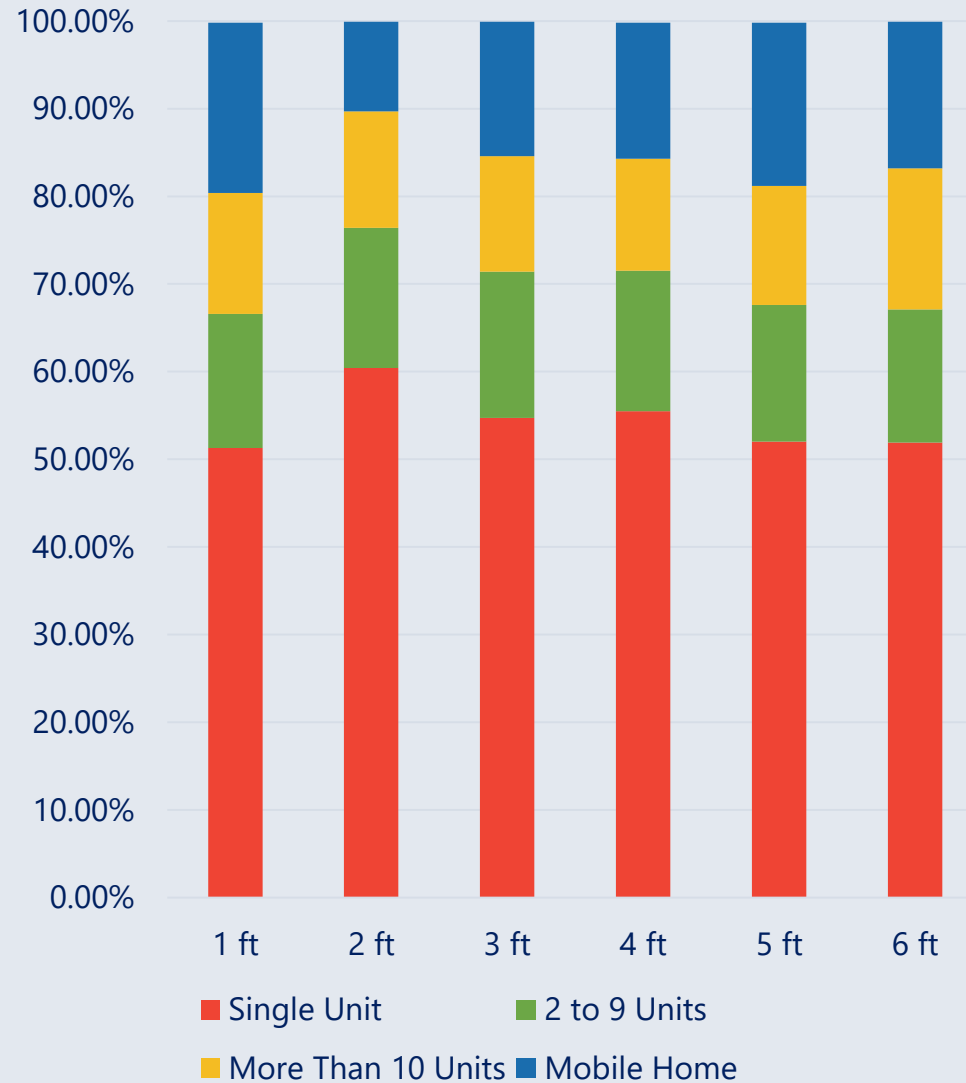
13% of homes were part of complexes with more than 10 units.

**16.7%**  
2 to 9 Units

About 17% of homes were part of 2 to 9-unit complexes.

**15.3%**  
Mobile Homes

15% of all homes were mobile homes.





# Brief history of the Florida Building Code



# Housing Stock Age

**33%**  
Before 1969

Almost a third of all houses were built before adoption of state minimum building codes

**40%**  
1970 to 1989

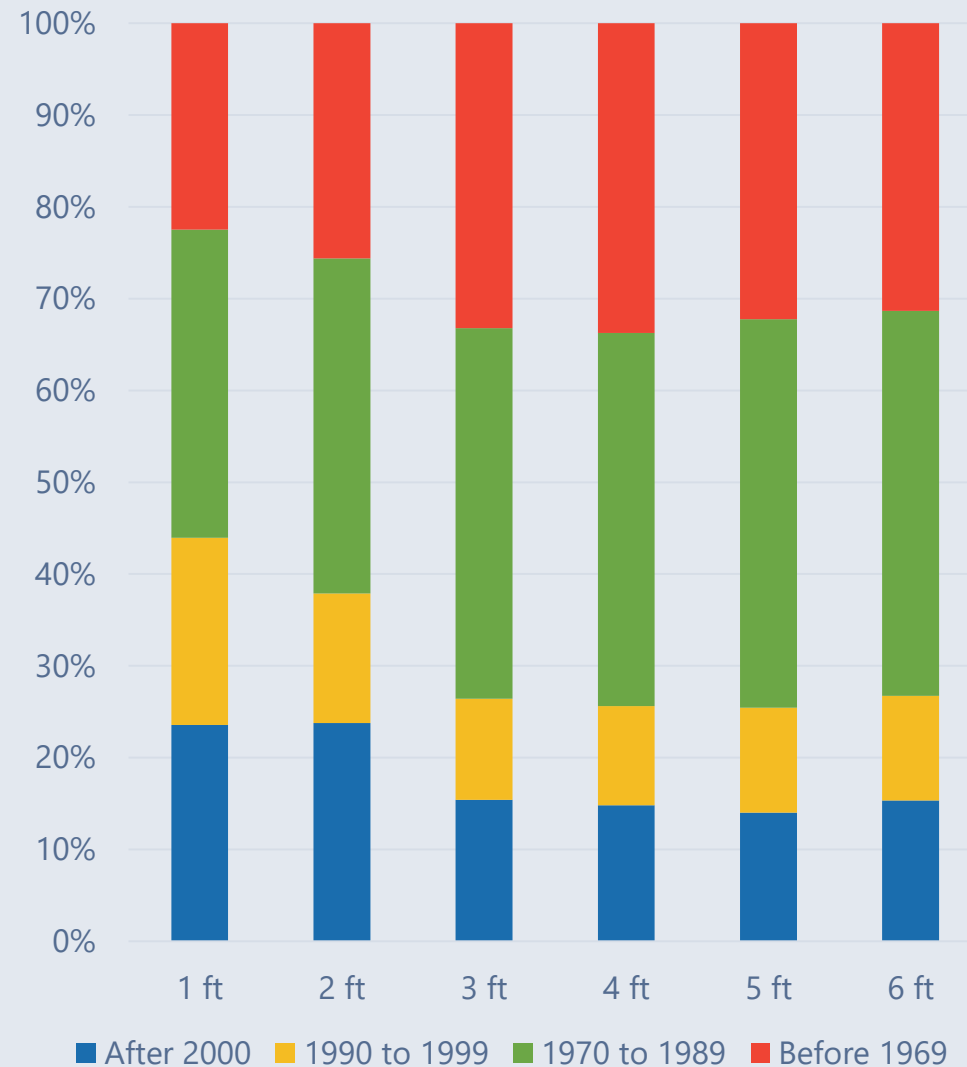
A significant portion of homes were built before uniform minimum building codes

**11%**  
1990 to 1999

11% of homes were built in the same decade as Hurricane Andrews and new building codes

**15%**  
After 2000

15% of housing stock built under the Florida Building Code, updated every three years

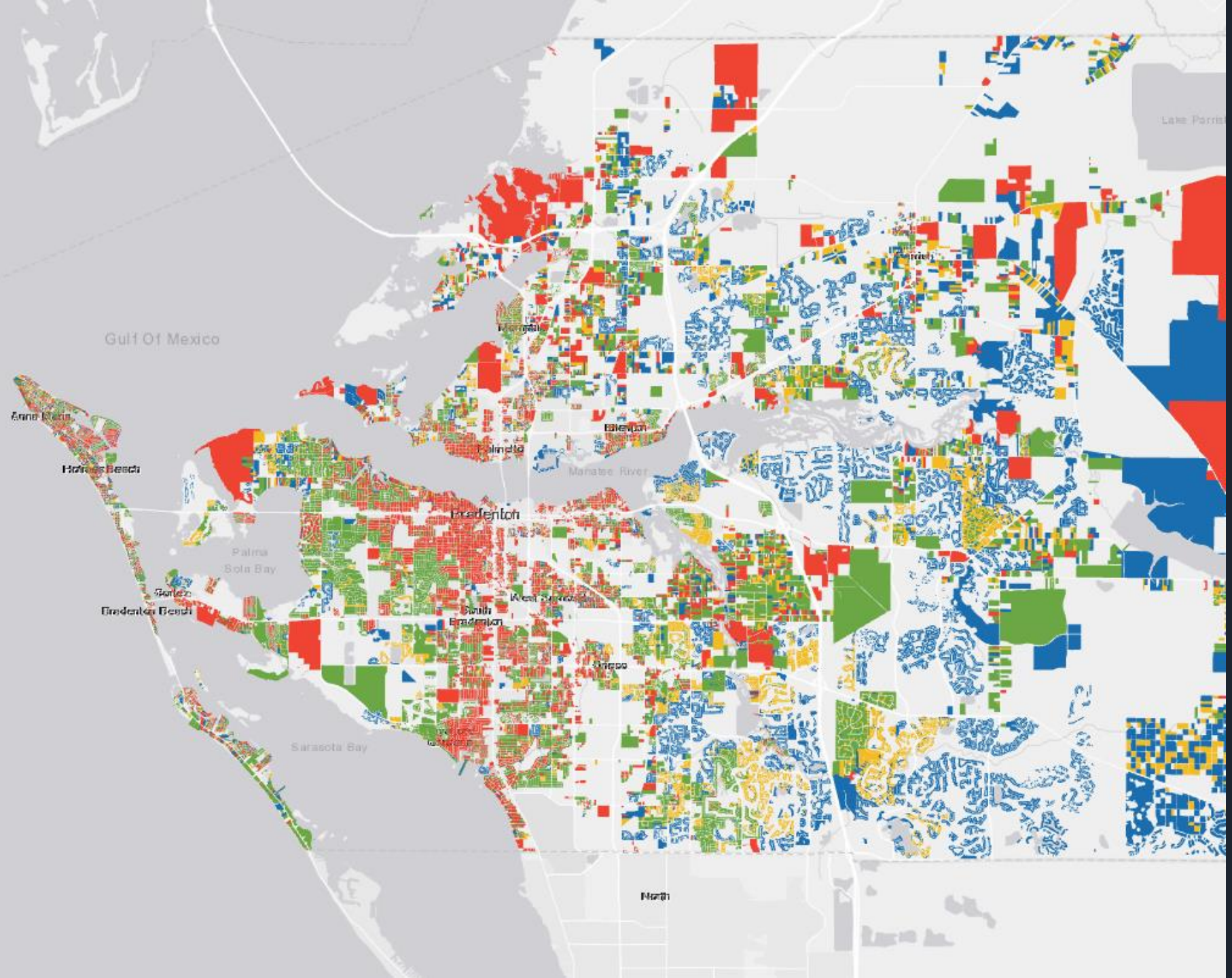


Before 1969

1970-1989

1990-1999

After 2000



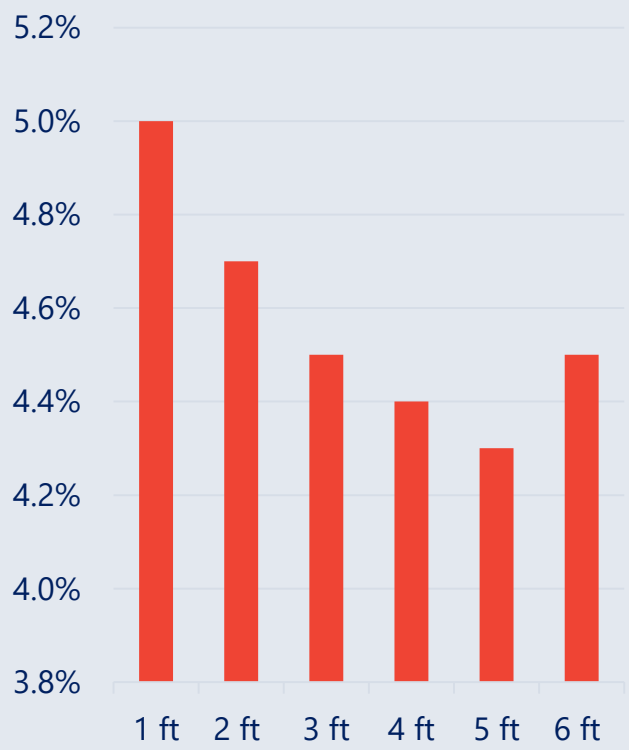
A map of Manatee County, Florida, overlaid with a color-coded economic impact analysis. The map shows various regions including Sarasota Bay, Bradenton, Palmetto, and Ellenton. The color coding ranges from green (low impact) to red (high impact). The Gulf of Mexico is visible to the west, and Lake Parrish is to the northeast. The word 'economics' is written in large white letters across the center of the map.

# economics

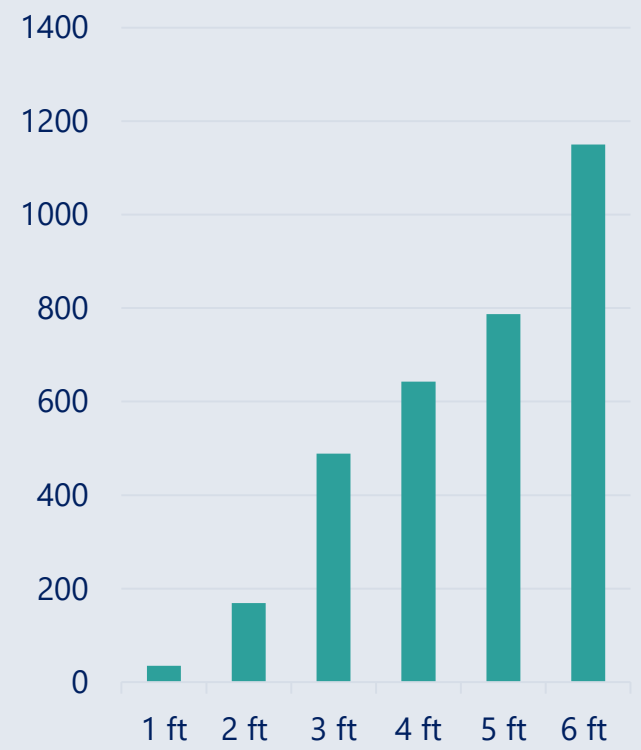
A brief overview on how SLR will impact our businesses and jobs.

# Economic Snapshot

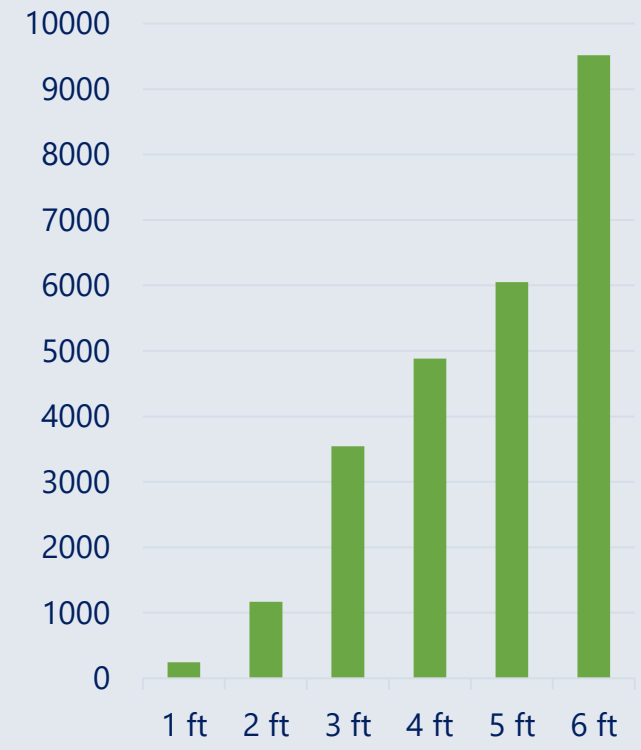
## Unemployment Rate



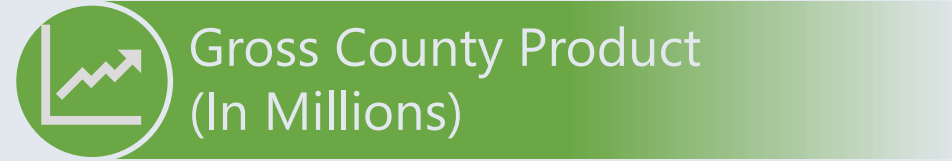
## Businesses



## Employees




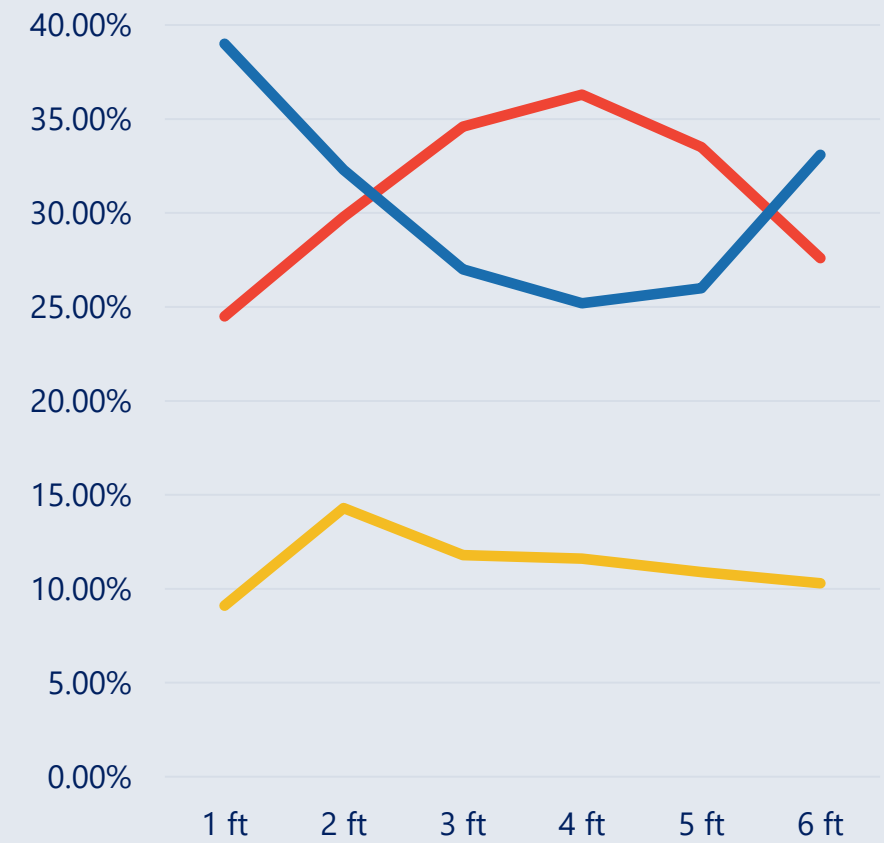
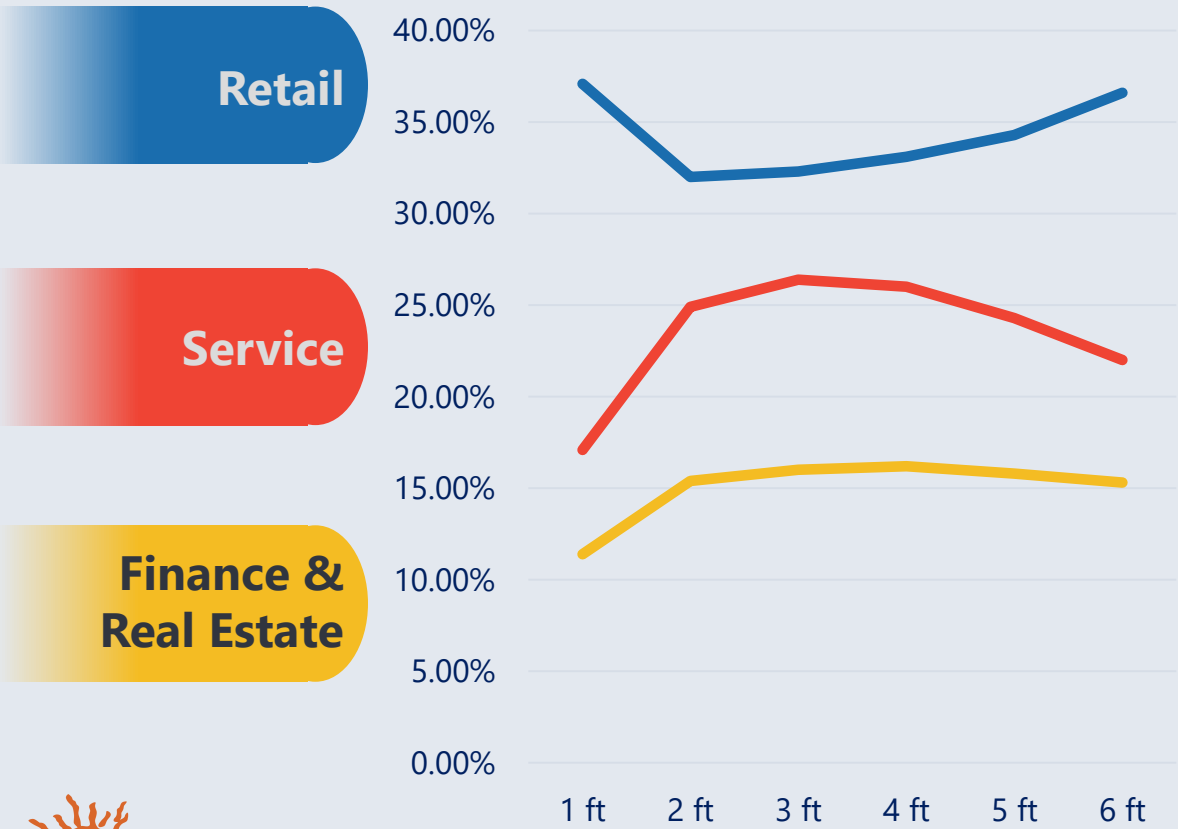
# Loss of Income & Gross County Product

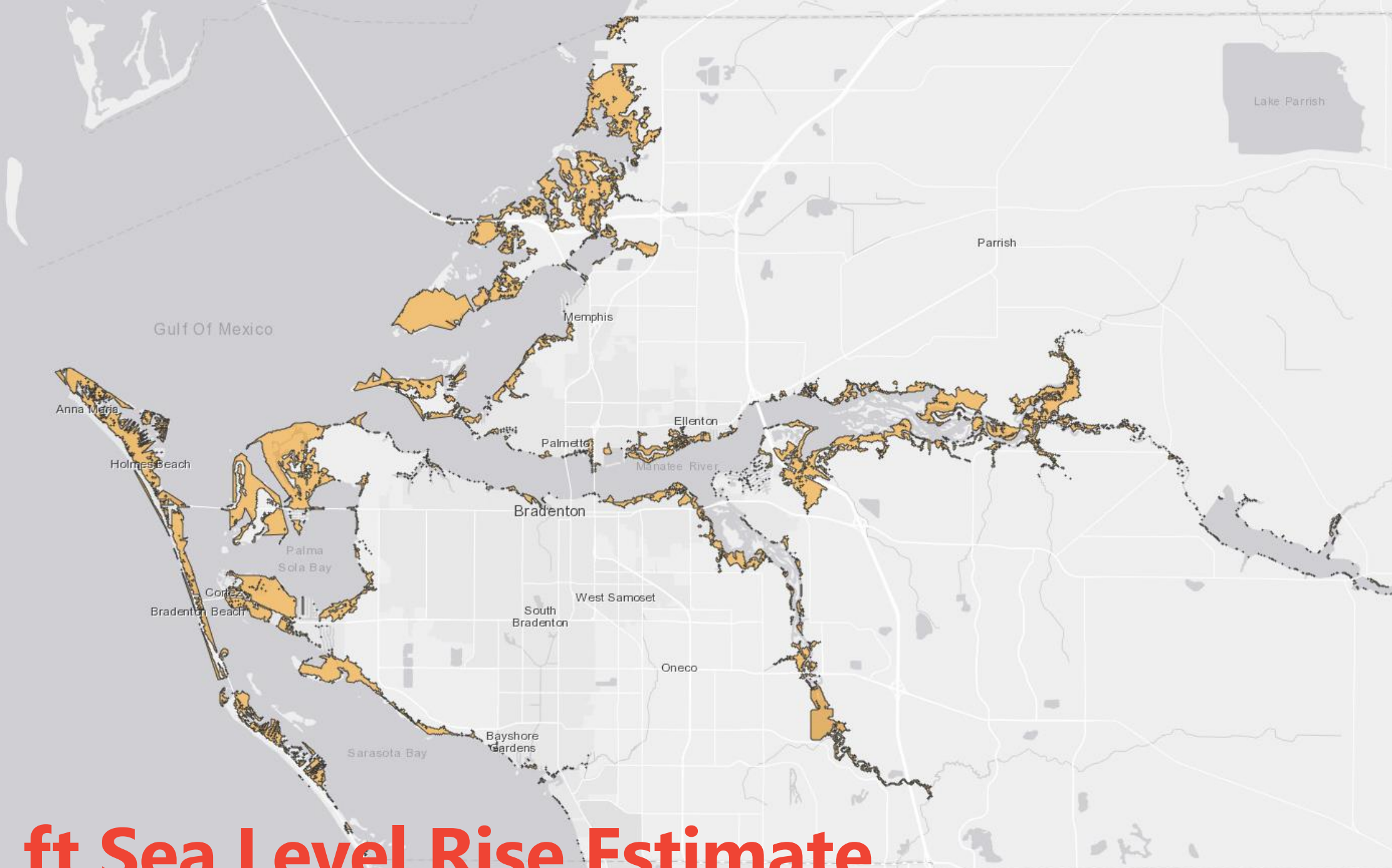


# Top Three Impacted Industries

 Businesses in Retail, Finance/Real Estate, and Services Industries

 Jobs in Retail, Finance/Real Estate, and Services Industries






# 3 ft Sea Level Rise Estimate

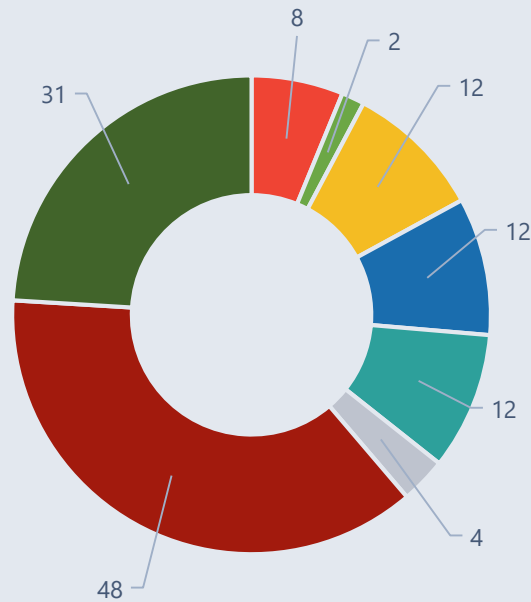


# Retail Impacts – 3 ft Study Area

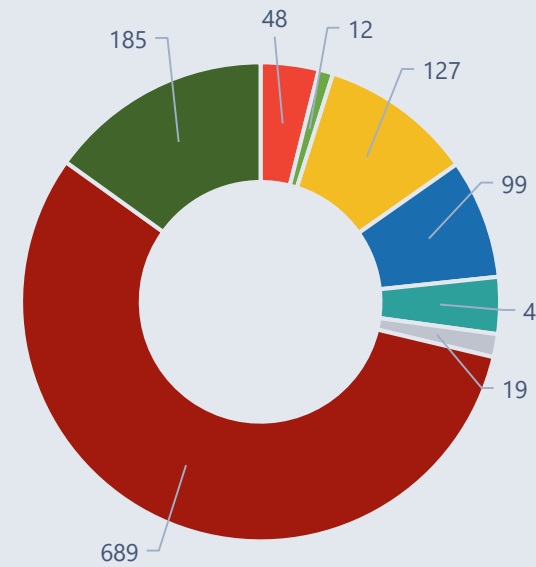
 **129** Businesses in the retail industry

 **1,227** Jobs in the retail industry

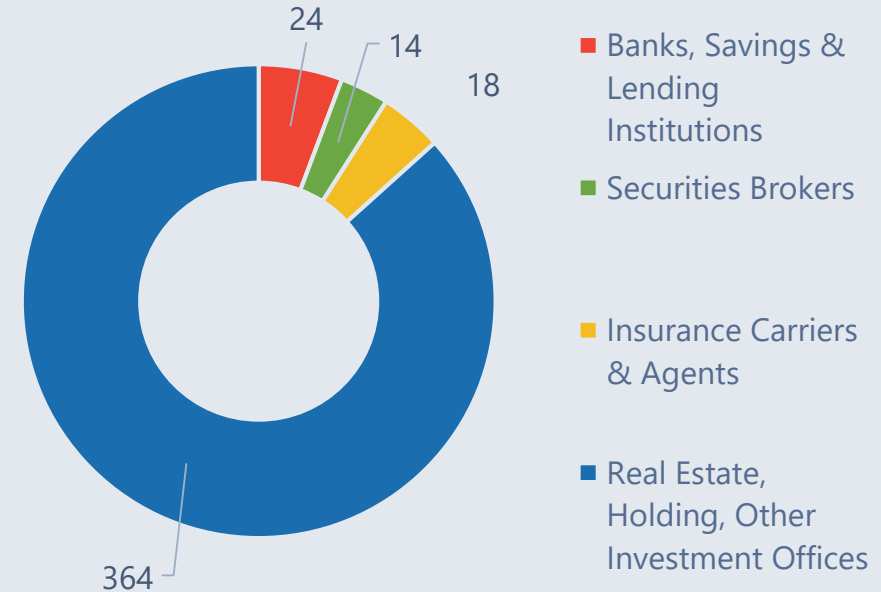
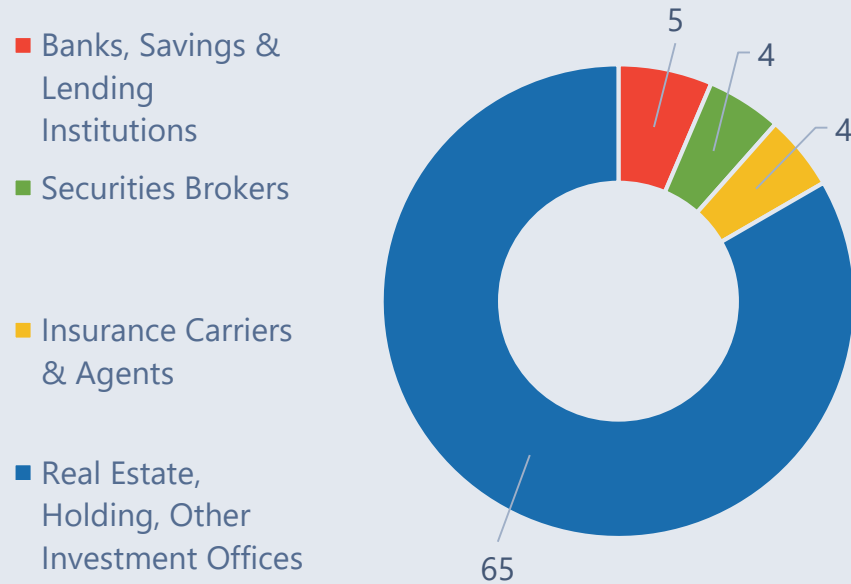
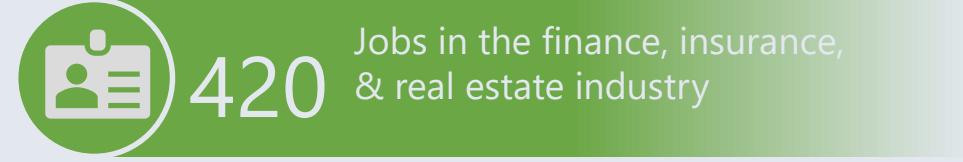
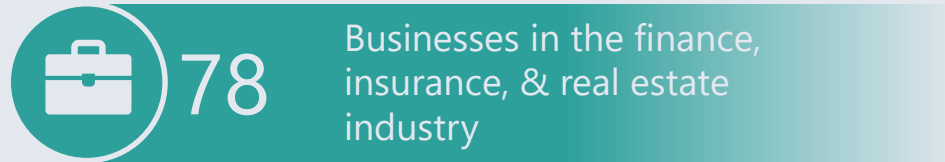
- Home Improvement
- General Merchandise Stores
- Food Stores
- Auto Dealers, Gas Stations, Auto Aftermarket
- Apparel & Accessory Stores
- Furniture & Home Furnishings
- Eating & Drinking Places



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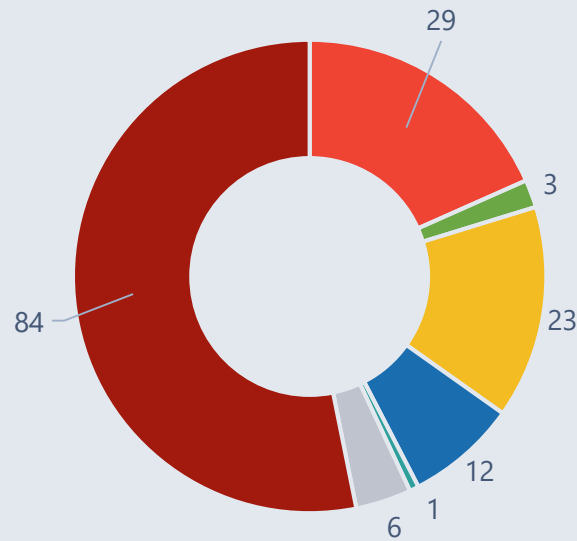
# Finance, Insurance, & Real Estate – 3 ft Study Area



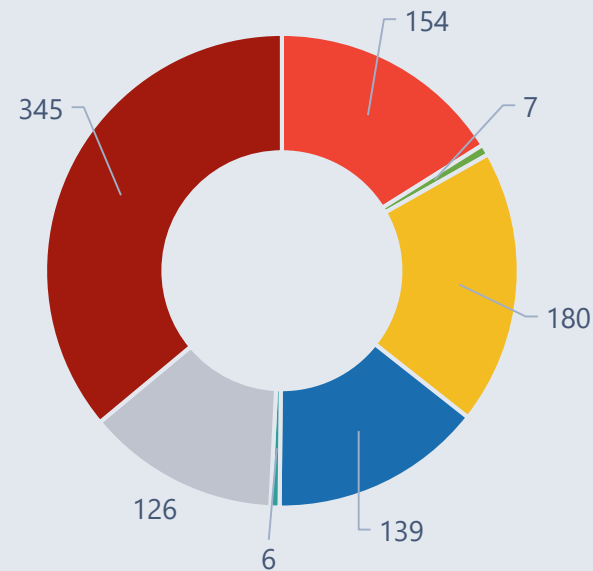
# Services Industry – 3 ft Study Area



- Hotels & Lodging
- Automotive Services
- Motion Pictures & Amusements
- Health Services
- Legal Services
- Education Institutions & Libraries
- Other Services



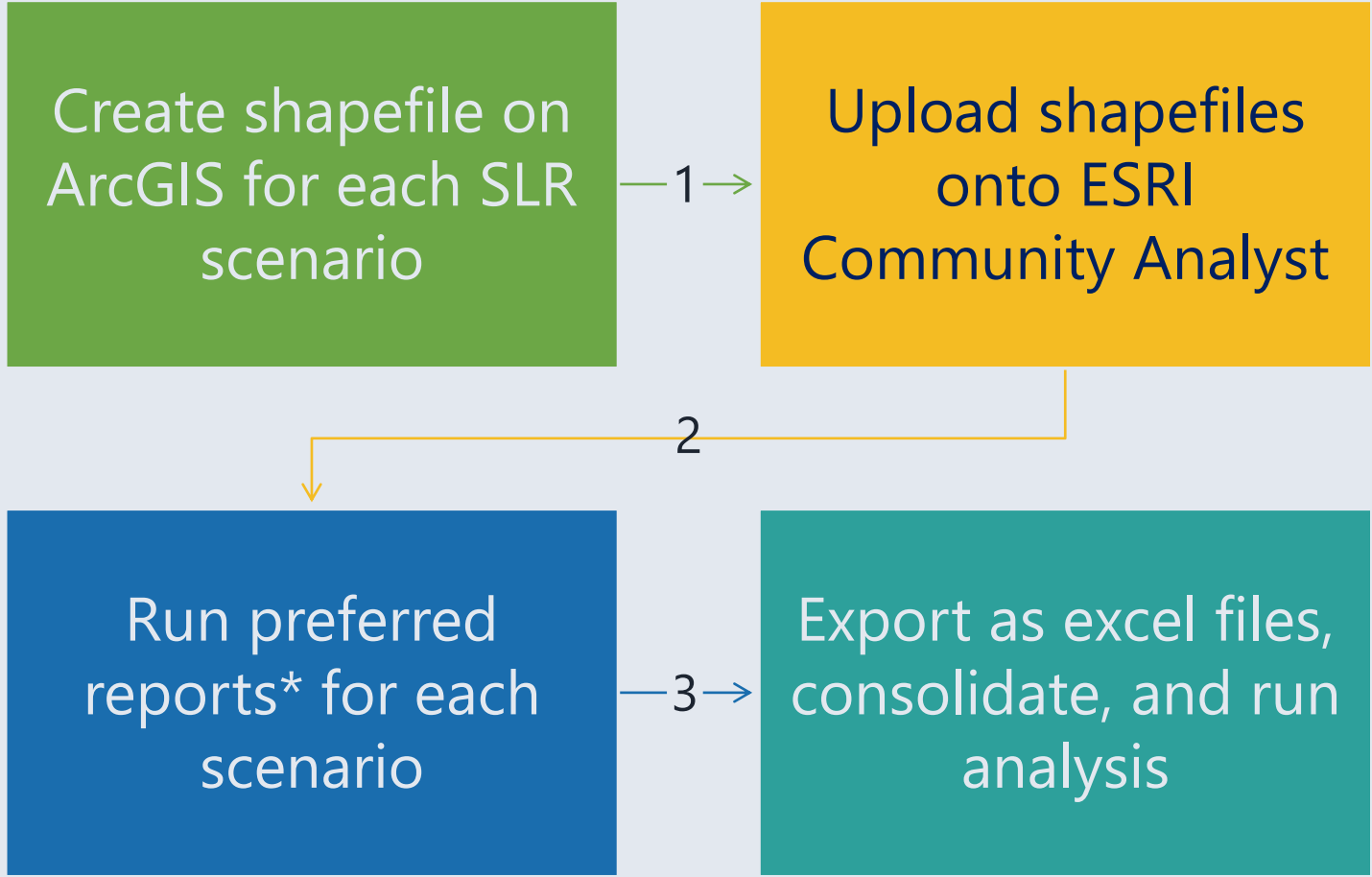
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- Other Services



A map of Manatee County, Florida, overlaid with a color-coded economic impact analysis. The map shows various municipalities and geographical features. The color coding ranges from green (low impact) to red (high impact). High-impact areas are concentrated in the central and northern parts of the county, particularly around Bradenton, Palmetto, and Ellenton. Other areas with moderate impact are shown in yellow and orange. The Gulf of Mexico is to the west, and Lake Parrish is to the east. The Manatee River flows through the center of the county.

DIY

Interested in doing something similar?



**\*For our analysis, we used:**

- ACS Population Summary
- ACS Housing Summary
- Community Profile
- Business Summary

# How we did our analysis





Build or select a preferred template for Infographic on ESRI Community Analyst



Select SLR Scenario



Run preferred template



Export as Dynamic HTML



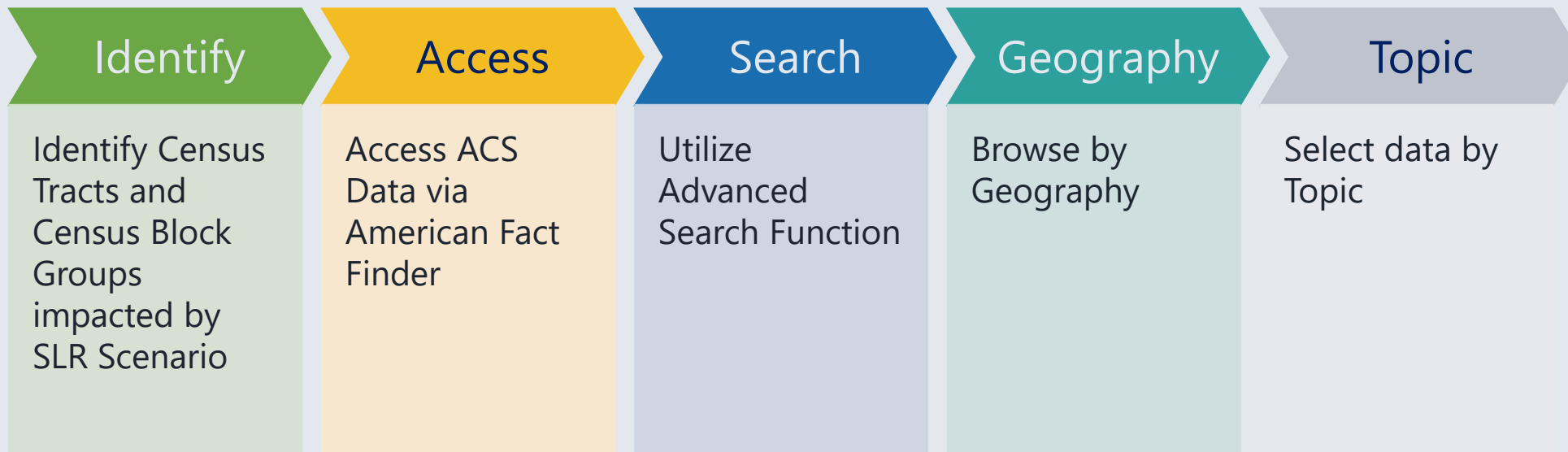
Host HTML file internally



Import HTML on Storymap

# How we made our online data viewer





**Don't have ESRI?**

<https://factfinder.census.gov/>



# Useful Links

## Data Collection

- <https://factfinder.census.gov/>
- <https://datausa.io/profile/geo/manatee-county-fl/>
- <http://flhousingdata.shimberg.ufl.edu/>

## GIS

- [https://www.mymanatee.org/departments/information technology services/geographic information systems](https://www.mymanatee.org/departments/information_technology_services/geographic_information_systems)
- <https://communityanalyst.arcgis.com/esriCA/login/>

## Climate Change Resources

- <https://www.mymanatee.org/gisportal/apps/sites/#/mc-climate-adaptation>
- <https://coast.noaa.gov/digitalcoast/tools/slr.html>





# Discussion & Contact

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