Economic Impact Analysis and Evaluation of Property Insurance Rate Impacts Resulting from Potential Changes to the Florida Building Code from the ICC Base Code Provisions

RINKER-CR-2018-101

Final Report

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Submitted to

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Executive Summary

The purpose of this report is to document the work done to date in preparing the economic impact report on the recent changes to the Florida Building Code (FBC) and their potential impacts on residential and commercial property insurance rates in the State of Florida.

Research was performed on the actual changes to the Florida Building Code codified under House Bill 1021 (HB 1021), which was passed May 5, 2017 and signed into law by Governor Rick Scott on June 23, 2017. In this report, the bill's changes relative to the FBC will be displayed in parentheses first by the bill number, followed by the FBC subsection amendment (HB 1021, FBC § X(X)). Under HB 1021, the 2017 Florida Building Code (2017 FBC) is adopted as the base Florida Building Code (FBC), with updates being readopted every three (3) years (HB 1021 Section 11, FBC § 11(7)(a)) based on recommendations of the Florida Building Commission (Commission). This changes the past precedent of the State adopting the newest International Code Council (ICC) edition released in that same time frame. Amendments meeting stated criteria could be made by the Commission as deemed necessary (HB 1021 Section 11, FBC § 553.73(9)(a)).

This creates a situation where Florida's Building Code could differ from the national standards of the latest ICC Building Code used by other states. Some important protections related to health, safety, and welfare standards were added to help protect the interests of Florida's citizens. Amendments to the FBC would be mandatory when needed to maintain funding and discounts from Federal Emergency Management Agency (FEMA), the National Flood Insurance Program (NFIP), and the U.S. Department of Housing and Urban Development (HUD) (HB 1021 Section 11, FBC § 553.73(7)(a)}. Additionally, existing FBC standards related to the intrusion of water (flood protection) or wind resistance could not be diminished below the base standards of FBC 2017, but could be strengthened (HB 1021 Section 11, FBC § 553.73). The study was peer reviewed. Further study is needed with additional work by subject matter experts to be able to show conclusive qualitative data.

Overview

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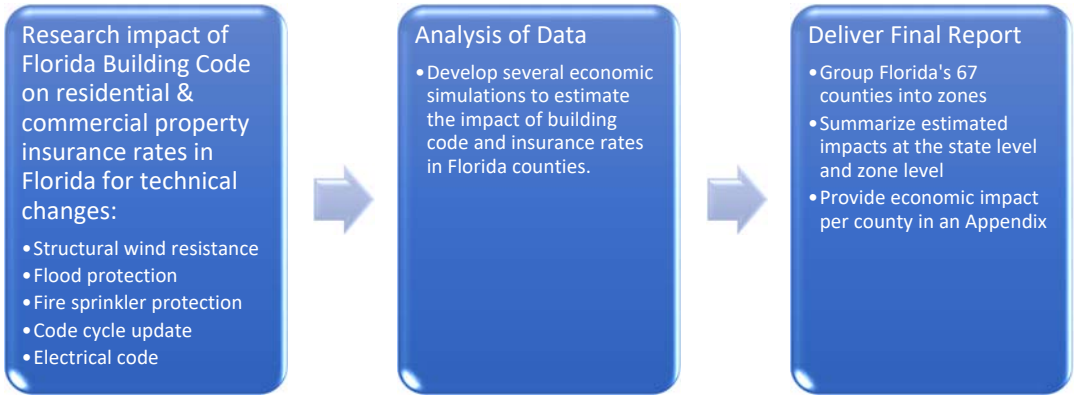


Figure 1: Research Plan

Scope of Work

1. Literature Review: Research the impact that potential changes to the Florida Building Code would have on residential and commercial property insurance rates in the state of Florida for various technical changes including:
    a. Reducing or increasing the model code provisions with respect to structural design to resist wind;
    b. Reducing or increasing the model code provisions with respect to flood protection;
    c. Reducing or increasing the model code provisions with respect to fire sprinkler protection and fire separation distance between buildings;
    d. Changing from a 3-year update code cycle to a 4-year, 5-year or 6-year update cycle;
    e. Adopting ISO-BCEGS electrical code;
    f. Identifying the impact of electrical code adoption on property insurance damage and repair claims.

2. Use the REMI PI+ model to develop several economic simulations that estimate the economic impact of building code and insurance rate changes in Florida and its counties.
    a. Develop a methodology and set of assumptions about cost estimates and insurance rate changes based on the best available data;
    b. Group Florida's 67 counties into zones using the best available data (wind zones or flood risk zone);
    c. Prepare a report that summarizes the estimated impacts at the state level and for the different zones. The economic impact indicators discussed will be employment, output (sales), personal income, and gross domestic product;
    d. Provide information economic impact information by county in an Appendix.

Value of Residential Properties in Florida

In order to examine the potential impacts of the changes to the FBC on residential and commercial property insurance premiums, it is necessary to have a base value for them in Florida for 2017. For the research questions being addressed in this study, both premium values for residential and non-residential (commercial) properties are required. It is also necessary to examine separately insurance premiums ("flood policies") in the 100-year flood plain (1% floodplain). Such flood policies for residential and commercial properties are made available through and backed by FEMA and the NFIP. Data gathered regarding these premium totals discussed in this Introduction will be described below.

Comprehensive Florida Residential Property Premiums

Data for residential premium values in Florida is available from the web site of the Florida Office of Insurance Regulation (OIR). A good source of data was found under the office's data reporting site, the Quarterly and Supplemental Reporting System (QUASRng), found at the web link https://apps.fldfs.com/QSRNG/Reports/ReportCriteriaWizard.aspx (Figure 2).

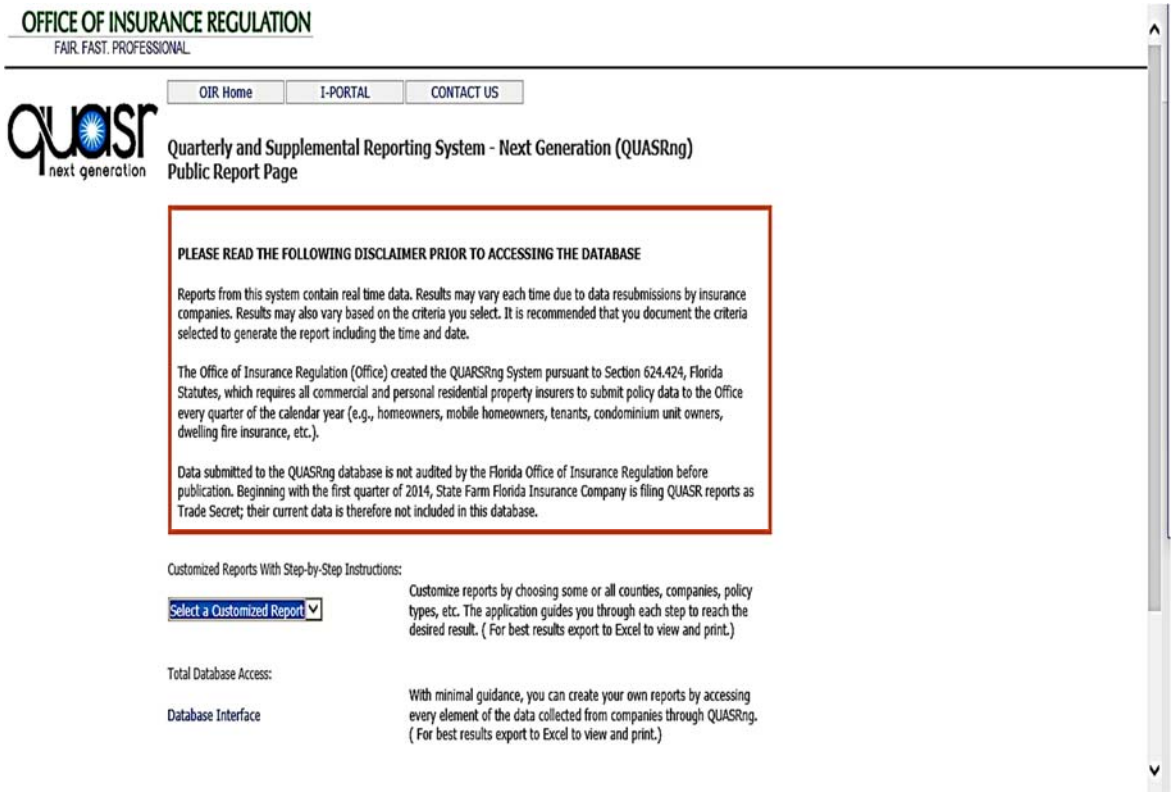


Figure 2: QUASRnx Home Page

From the drop-down menu titled Select a Customized Report, residential insurance premiums can be brought up by quarter for a given year through QUARTRnx, the agency's data search engine. As of the first quarter of 2014, State Farm Insurance data has not been included due to

their filing being classified as trade secret data. It is therefore recommended that premium values for 2013 be used, so that State Farm data is captured. Either the mean or last quarter residential premium values could be used. Due to the comprehensive nature of the data provided, decisions would need to be made over many categories of premium values to be excluded. The inflation calculator discussed later in this report could be used to find the present value of these policies.

Florida Residential Flood Policies

For data on flood policies, numbers found from the FEMA web site are recommended to be used. Particularly, data from the NFIPs BureauNet web site, https://bsa.nfipstat.fema.gov/ could be very useful for this project (Figure 3). By selecting the Reports link on the left side of the screen, the Policy Information by State report can be chosen. The report shows NFIP policies by state (Figure 4), or by clicking on the state's name highlighted in blue, policy premium totals at the county and municipal level can be provided (Figure 5).

Figure 3: BureauNet Home Page

Policy Statistics

in effect on report "AS OF" date below

Policy Statistics
Country-Wide
AS OF 12/31/2017

State Name	Policies In-force	Insurance In-force whole $	Written Premium in-force
Alaska	2,457	661,890,500	2,214,675
Alabama	55,138	12,843,786,400	36,821,042
Arkansas	16,677	3,036,720,300	13,641,433
Arizona	32,245	8,048,529,100	21,340,782
California	239,912	68,792,457,600	189,720,955
N Mariana Islands	9	630,300	23,155
Colorado	21,059	5,416,569,400	17,977,259
Connecticut	38,492	9,798,490,400	52,908,199
District Columbia	2,036	490,874,500	1,445,625
Delaware	26,763	7,026,942,200	19,576,740
Florida	1,759,229	434,492,887,000	960,007,933
Georgia	88,806	23,346,259,100	67,853,678

Figure 4: NFIP Premiums by State

Policy Statistics
Florida
AS OF 12/31/2017

County Name	Community Name	Policies In-force	Insurance In-force whole $	Written Premium In-force
		8	1,465,500	2,310
ALACHUA COUNTY	ALACHUA COUNTY*	1,455	386,882,900	895,260
	ALACHUA, CITY OF	115	30,985,800	83,400
	ARCHER, CITY OF	6	1,231,200	3,049
	GAINESVILLE, CITY OF	1,246	286,704,900	757,060
	HAWTHORNE, CITY OF	6	1,211,300	4,013
	HIGH SPRINGS, CITY OF	31	7,388,600	14,694
	LA CROSSE, TOWN OF	1	350,000	373
	MICANOPY, TOWN OF	10	2,497,000	6,595
	NEWBERRY, CITY OF	29	7,483,000	9,415
	WALDO, CITY OF	1	350,000	373
BAKER COUNTY	BAKER COUNTY *	143	26,803,700	92,492
	MACCLENNY,CITY OF	23	6,166,000	8,970
BAY COUNTY	BAY COUNTY*	14,394	3,538,574,800	6,170,760
	CALLAWAY, CITY OF	862	231,578,400	515,679
	CEDAR GROVE, TOWN OF	6	1,303,600	2,220
	LYNN HAVEN, CITY OF	1,847	557,275,800	1,086,925
	MEXICO BEACH, CITY OF	949	245,863,100	518,369
	PANAMA CITY BEACH, CITY OF	12,536	2,582,328,900	3,478,031
	PANAMA CITY, CITY OF	2,522	700,702,300	1,610,002
	PARKER, CITY OF	262	66,575,200	125,015
	SPRINGFIELD, CITY OF	197	42,894,300	125,432
BRADFORD COUNTY	BRADFORD COUNTY *	394	74,460,200	262,671
	HAMPTON, CITY OF	2	153,500	718
	LAWTEY, CITY OF	6	1,090,500	5,459
	STARKE, CITY OF	71	15,360,300	83,425
BREVARD COUNTY	BREVARD COUNTY *	22,693	6,383,475,300	9,436,567
	CAPE CANAVERAL PORT AUTHORITY	18	9,266,700	32,112
	CAPE CANAVERAL, CITY OF	3,225	608,161,900	945,591
	COCOA BEACH, CITY OF	6,503	1,322,314,600	2,415,884
	COCOA, CITY OF	459	112,517,700	184,119
	GRANT-VALKARIA, TOWN OF	327	99,784,600	190,955
	INDIALANTIC, TOWN OF	793	218,744,200	350,160
	INDIAN HARBOR BEACH, CITY OF	1,877	494,019,400	652,717

Figure 5: NFIP Premiums by County or City

The value of this data is that it will allow the value of floodplain premiums in 2017 to be looked at either at the macro (state) or micro (county/city) data levels, or a combination thereof as required by the research.

In speaking with the OIR, it was stated that it does not keep records on insurance premiums for non-residential commercial structures. However, the web site of the National Association of Insurance Commissioners (NAIC) does provide this data under its annual reports titled *Statistical Compilation of Annual Statement Information for Property/Casualty Insurance Companies.* These reports are available through the web site *http://www.naic.org/prod_serv_publications.htm*. The latest data for the total value of state premiums collected in for 2015. However, this data can be extrapolated using the inflation calculator from the Bureau of Labor Statistics found on the web at https://www.bls.gov/data/inflation_calculator.htm (Figure 6)

Comprehensive Value of Commercial Building Premiums in Florida

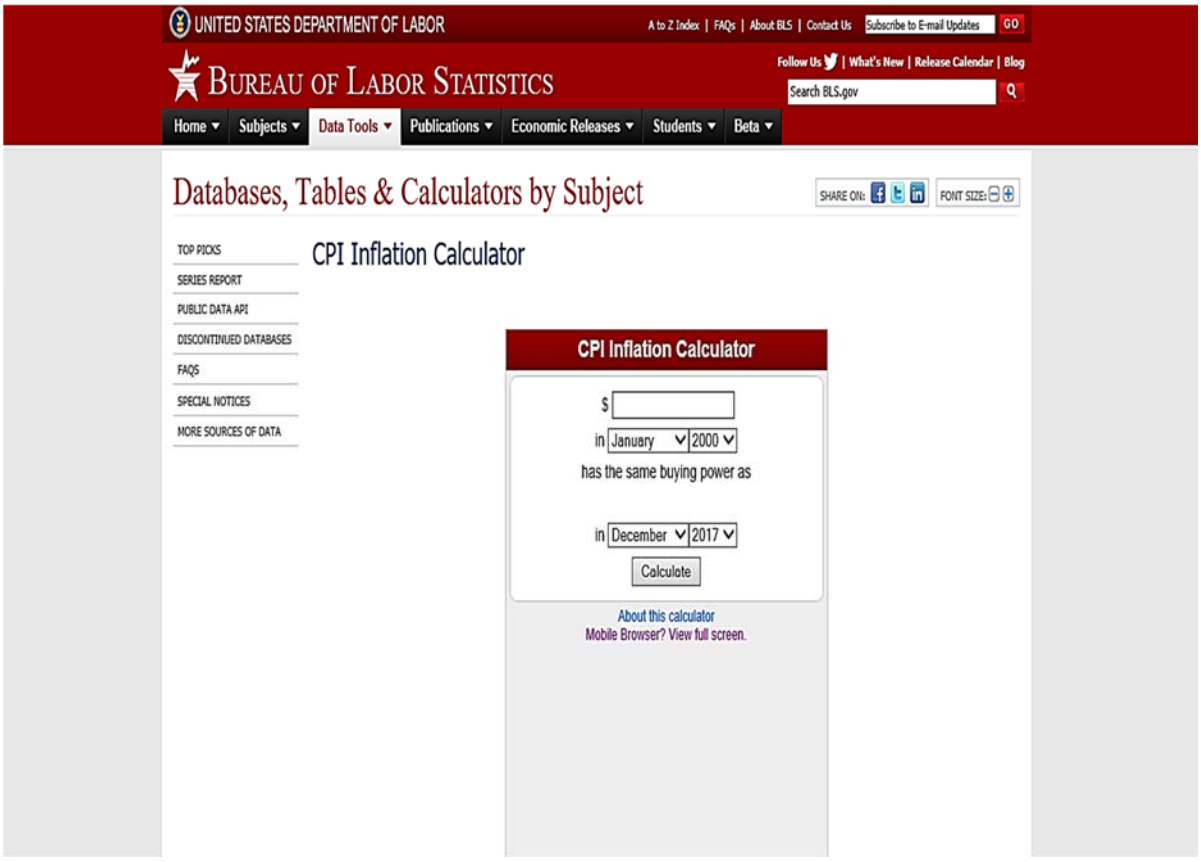


Figure 6: Bureau of Labor Statistics Inflation Calculator

Modeling Impacts of Building Code Changes on Insurance Premiums

As was mentioned under Limitations of Project in the Contract for Services, one difficulty of the project will be access to proprietary information used by insurance companies in establishing rates based on construction code standards. Not only is this information proprietary, but it is very esoteric knowledge for a researcher not as familiar with the field. Also, the development of a modeling system for a project like this would be cost-prohibitive. As a result, the OIR recommends the best way to examine the potential impacts of the changes to the FBC on residential and commercial insurance premiums would be by contracting to have construction scenarios run through the Florida Public Hurricane Loss Model, developed through Florida International University (FIU) for OIR. Used by experts in diverse fields such as meteorology, wind/structural engineering, computer science, GIS, as well as actuarial and mathematicians, this model uses various hurricane models to look at construction and insurance impacts of the storms. More information on the Florida Public Hurricane Loss Model can be found on the web at https://www4.cis.fiu.edu/hurricaneloss/.

Task 1.a. Reducing or Increasing the Model Code Provisions for Structural Wind Resistance

As mentioned earlier, HB 1021 restricts changes to the building code related to wind resistance so the standards cannot be decreased from those at the time of the bill's adoption. The scenario applicable here would be examining the impact on residential and commercial property insurance premiums should ICC raised its code standards in other states, but the Florida code remain unchanged at its originally adopted standard. ICC changes to the wind load standards for garage and rolling doors is recommended as a good wind resistance standard to use for this research project. The 2017 Florida Wind-Bourne Debris Region map (Figure 7) would be used in the calculations of the wind resistance code change's impacts on these insurance premiums. Different scenarios would then be run through the Florida Public Hurricane Loss Model.

Task 1.b. Reducing or Increasing Model Code Provisions for Flood Protection

As with Task 1.a. above, HB 1021 does not allow flood protection standards to be reduced below the level of the 2014 FBC. Additionally, the bill does not allow the standards below those that would jeopardize Florida's funding of federal flood insurance under the NFIP. Thus, the only scenario that would be applicable here would be the ICC Building Code's flood protection provisions being strengthened, but those of the NFIP and the FBC being left at their current standards. One potential code change scenario to examine would be the NFIP standard that areas below base flood elevation (BFE) have flood vents to help resistance of hydrostatic and hydrodynamic forces at a ratio of one (1) spare inch of flood venting for every one (1) square foot of enclosed space. Different scenarios for venting standards could be run under various storm conditions utilizing the Florida Public Hurricane Loss Model.

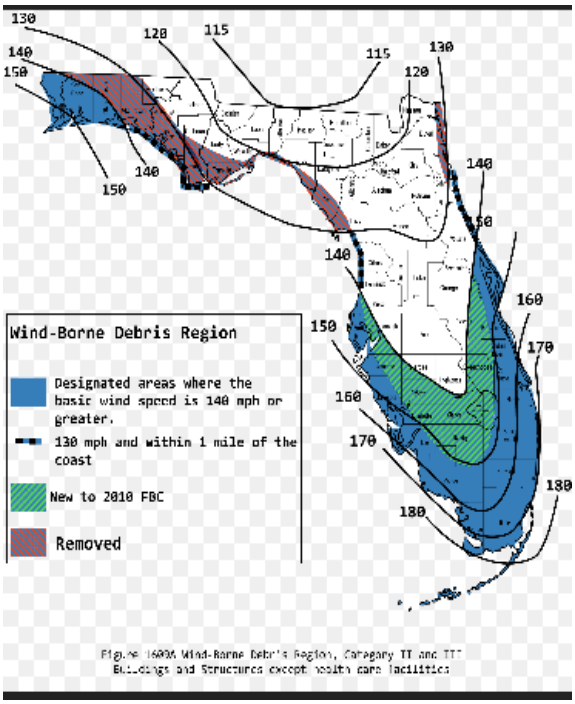


Figure 7: Florida Wind-Bourne Debris Region Map

Task 1.c. Reducing or Increasing Model Code Provisions for Fire Sprinkler Protection and Fire Separation Protection Between Buildings

The researchers attempted to find this information, however, due to time constraints, the TAC gave us the option to remove this task from the scope of work.

Task 1.d. Changing from a Three (3) Year Code Update to a Four (4) Year, Five (5) Year, or Six (6) Year Update Cycle

Through a review of the final adopted version of HB 1021 it has been determined that the traditional three (3) update cycle of the ICC Building Code has been maintained with the FBC. This study will examine the economic impacts of four (4), five (5), or six (6) year update cycles being used in the future.

Task 1.e. Adopting the ISO-BCEGS Electrical Code

The Insurance Service Office (ISO), which manages the Building Code Effectiveness Grading Schedule (BCEGS), is a leading source of information about risk. The BCEGS assesses the building codes in effect in communities and how the community enforces its building codes, with a special emphasis on mitigation of losses from natural hazards. In other words, participating municipalities with well-enforced, up-to-date codes demonstrate lower loss experience, and have lower insured losses.

The BCEGS program assigns each participating municipality a BCEGS grade of 1 to 10 (one being exemplary). A grade of 98 is given to communities that refuse to participate. Based on the above grading system, the ISO gives insurers BCEGS classifications, BCEGS advisory credits, and related underwriting information.

A community's classification is based on the administration of codes, the review process of building plans, and field inspections. There is not a separate electrical code. Rather, the ISO-BCEGS program examines the electrical code as one component of the overall efficiency of a municipality's building code process.

Figure 8 shows the distribution of class numbers among the participating municipalities in Florida and separates the classification further into residential and commercial buildings.

Task 1.f. Identifying the Impact of Electrical Code Adoption on Property Insurance Damage and Repair Claims

Since there is no separate electrical code standard, this study will examine the economic impacts of making participation by municipalities in the ISO-BCEGS program mandatory. Currently, a municipality's participation in the ISO-BCEGS program is voluntary. As of February 2007, there were 13 municipalities in the State of Florida not participating (Figure 9). As of the last audit of municipalities in 2006, there are 410 of them in Florida.

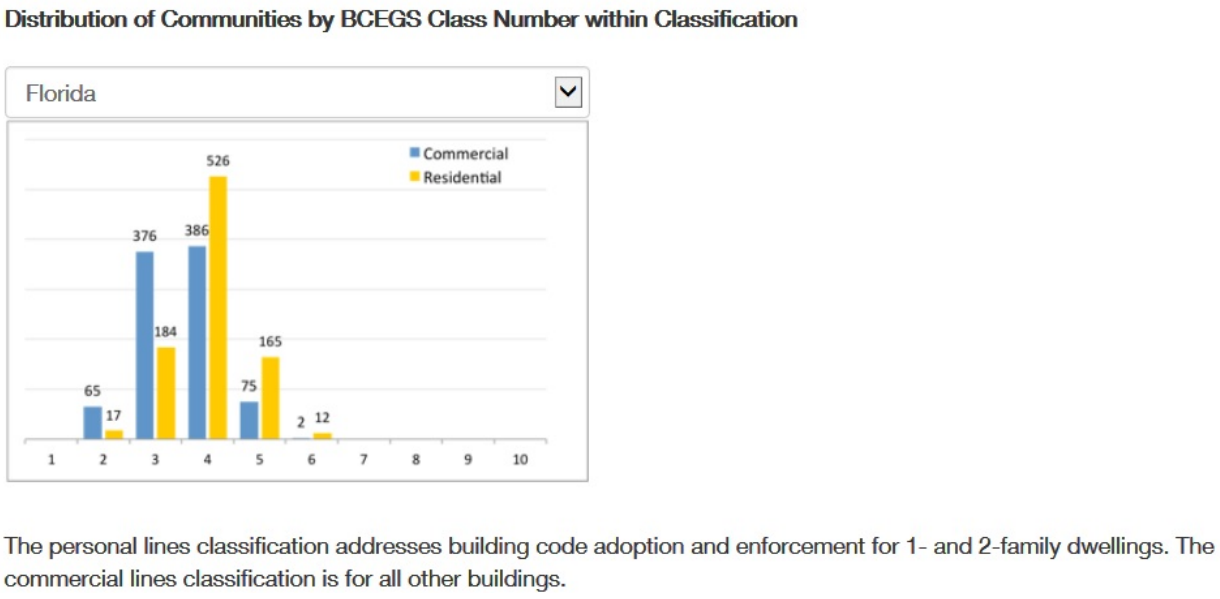


Figure 8: Florida Communities BCEGS Class Number

Community and BCEGS™ Information			
Community Name	County Name	BCEGS™ PL Class	survey year
CORAL GABLES	MIAMI-DADE	01	2000
ALTAMONTE SPRINGS	SEMINOLE	02	2004
APOPKA	ORANGE	02	2001
ASTATULA	LAKE	02	2002
BAY HARBOR ISLANDS	MIAMI-DADE	02	2003
CLERMONT	LAKE	02	2002
COOPER CITY	BROWARD	02	2003
EUSTIS	LAKE	02	2001
GOMEZ	MARTIN	02	2001
HOBE SOUND	MARTIN	02	2001
HUTCHINSON ISLAND	MARTIN	02	2001
INDIAN SHORES	PINELLAS	02	2005
INDIANTOWN	MARTIN	02	2001
JENSEN BEACH	MARTIN	02	2001
JUPITER	PALM BEACH	02	2003
KEY BISCAYNE	MIAMI-DADE	02	2006
LAKE CO	LAKE	02	2002
MARTIN CO	MARTIN	02	2001
MIAMI BEACH	MIAMI-DADE	02	2005
MIAMI DADE CO	MIAMI-DADE	02	2002
MONTVERDE	LAKE	02	2002
NORTH BAY VILLAGE	MIAMI-DADE	02	2006
OCALA	MARION	02	2001
PALM CITY	MARTIN	02	2001
PORT SALERNO	MARTIN	02	2001
PORT SEWALL	MARTIN	02	2001
RIO	MARTIN	02	2001
SALERNO	MARTIN	02	2001
SANIBEL	LEE	02	2002
SOUTH MIAMI	MIAMI-DADE	02	2005
SUNRISE	BROWARD	02	2004
TREASURE ISLAND	PINELLAS	02	2005
UMATILLA	LAKE	02	2001
WEST MIAMI	MIAMI-DADE	02	2002
WINTER GARDEN	ORANGE	02	2001
WINTER PARK	ORANGE	02	2005
BOCA RATON	PALM BEACH	98	2005
BRINY BREEZES	PALM BEACH	98	1997
DUNDEE	POLK	98	2002
GOLFVIEW	PALM BEACH	98	1997
HIALEAH GARDENS**	MIAMI-DADE	98	2002
LAKE BUTLER	UNION	98	1997
MIDWAY	GADSDEN	98	2003
OCEAN BREEZE PARK	MARTIN	98	1997
RAIFORD	UNION	98	1997
SEA RANCH LAKES	BROWARD	98	1996
SEMINOLE TRIBE	BROWARD	98	1996
UNION CO	UNION	98	1997
WORTHINGTON SPRINGS	UNION	98	1997

** Community has contacted ISO to particiate in the program. ISO will evaluate community ASAP.

Figure 9: Florida Communities with Highest Grades and Non-Participants (February 2007)

Methodology, Inputs, and Assumptions

Economic impact simulations estimate the direct, indirect and induced effects generated by changes in public policy. The direct effect is defined as the benefits created by the original economic adjustments. In turn, these changes will also affect the regional demand for goods and services. This is considered an indirect economic impact. Finally, the local consumption or induced economic effect is the money that households spend on such things as rent, food, and

entertainment. These indirect and induced impacts are often referred to as the economic ripple effect.

One of the most important parts of creating a good economic simulation is identifying and developing the data that will be entered into the model. As part of this project, the ECFRPC performed an extensive literature review and contacted several state agencies to identify good data inputs that could be used to develop a comprehensive economic impact simulation. Despite staff's best efforts, the ECFRPC was unable to find any data that could be entered into the REMI PI+ model. While the absence of data can be a hindrance to developing good estimates, it is not integral to creating a valid economic model. Because of this situation, the ECFRPC explored several economic simulation scenarios

ECFRPC staff had to make several assumptions when developing these economic impact analysis simulations. First, the ECFRPC assumed that there is a strong relationship between the strength of building codes and insurance rates based on Florida's experience after Hurricane Andrew and the 2004 Hurricane season. During the aftermath of these hurricanes, several national insurance carriers stopped writing or renewing property insurance policies in the state. The remaining companies raised premiums and deductibles across the board and limited the number of high risk policies they wrote. Based on these past experiences, it will be safe to assume that any changes to Florida's building code would be interpreted as a source of risk for insurance carriers. However, members of the Technical Advisory Committee (TAC) expressed reservations to this approach. At their request, the ECFRPC ran the Scenario 1 simulation.

Since there was no actuarial information available, the ECFRPC had to estimate insurance costs for both households and businesses (Figure 10). REMI already has some of these costs built into the model, so the ECFRPC assumed that they will rise by several percentage points from 2022 to 2040. The net household insurance cost was progressively increased between five and seven percent for this time period for all households in all Florida counties (Figure 11).

For the original simulation, the ECFRPC applied an increase in production costs between one and three percent across different industries. The assumption here is that insurance is not the largest cost for Florida businesses, especially when compared to labor and rent costs. TAC members felt that the result numbers (discussed later in the report) were too high. For Scenario 1, the ECFRPC adjusted these production costs increases based only on the amount that each industry spends on financial and insurance services based on the National Input/Output Matrix (Figure 12).

Variables	Industry	Definition
Production Costs	Construction	Change the relative production costs of doing business for a specific industry without directly changing the relative costs of factor inputs (labor, capital, and/or fuel)
	Insurance	
Consumer Price	Net Household Insurance	Change the commodity price within the specified consumption category

Figure 10: Insurance Rate Simulation Inputs

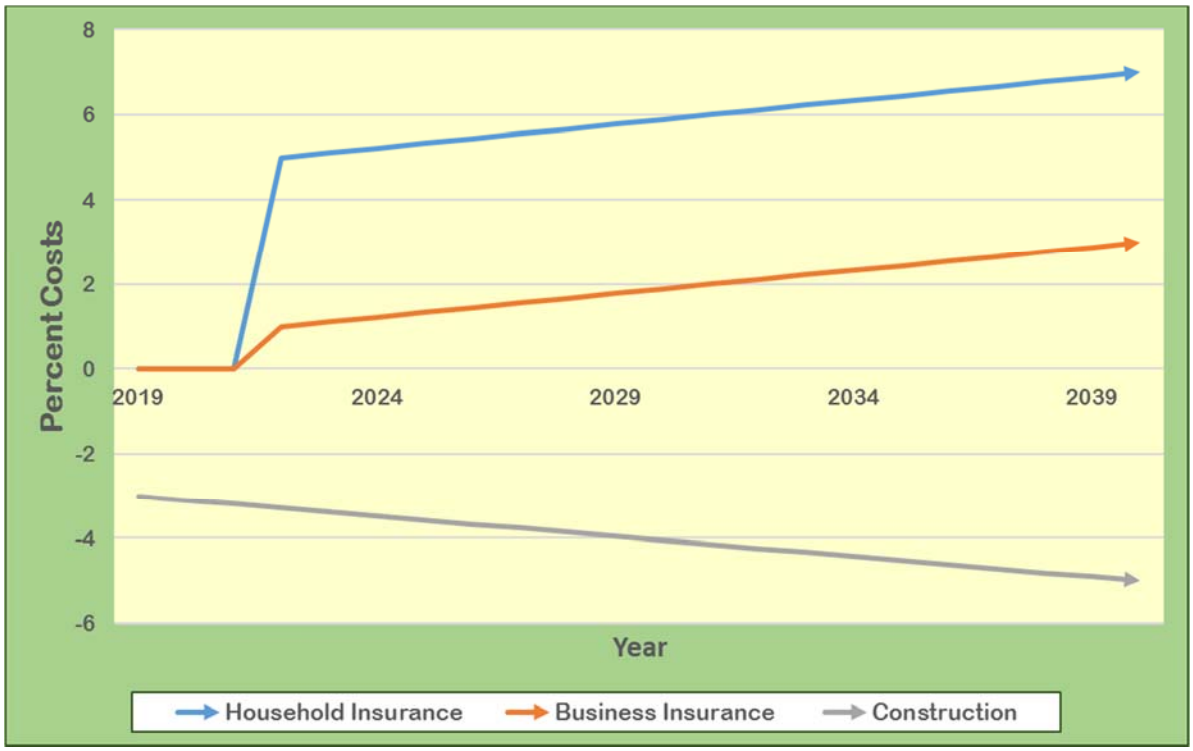


Figure 11: Changes in Percentage Costs as Entered into the Economic Simulation

Industry	Percent of Costs
Forestry, Fishing, and Related Activities	0.032
Mining	0.046
Utilities	0.053
Construction	0.017
Manufacturing	0.013
Wholesale Trade	0.082
Retail Trade	0.061
Transportation and Warehousing	0.063
Information	0.021
Finance and Insurance	0.614
Real Estate and Rental and Leasing	0.102
Professional, Scientific, and Technical Services	0.064
Management of Companies and Enterprises	0.097
Administrative and Waste Management Services	0.069
Educational Services; private	0.036
Health Care and Social Assistance	0.142
Arts, Entertainment, and Recreation	0.076
Accommodation and Food Services	0.044
Other Services, except Public Administration	0.141
State and Local Government	0.067

Source: U.S. Bureau of Economic Analysis

Figure 12: Insurance Cost by Industry as a Percentage of Total Industry Costs

Based on staff's experience in the planning and building industry, the largest costs incurred by construction companies are land, equipment, and labor. Changing the building codes will not decrease any of these expenses. The first two scenarios assumed that starting in 2019, there will be a slight decrease in the construction industry's production costs starting at three percent and progressively increasing to five percent by 2040. At the request of the TAC, the ECFRPC ran Scenario 1 that increased construction production costs between one and three percent during the study period.

Using this information, the ECFRPC developed three different simulation scenarios that calculate the economic impact that these changes would have on the state's economy, Florida's 67 counties, and ten regions. Moreover, the information displayed in the results tables is an average of the forecast for the 23-year period of the simulation. The ECFRPC also entered the percentage cost changes uniformly across all Florida regions rather than differentiating between coastal and inland counties. This avoided having to make additional assumptions that could generate dubious results. To better summarize the results of this simulation, the ECFRPC aggregated Florida's 67

counties into ten different regions using the geographic boundaries of the regional planning councils. Next the results for Scenario 1 for the state of Florida are discussed. The detailed results for the scenario and the geographies (regions and economies) are included in the Appendix A.

Economic Scenario 1 Results

Scenario 1 was developed in response to the comments made at the last TAC meeting. To develop this scenario, the ECFRPC increased business production costs based on the proportion that each industry pays for insurance services. These changes resulted in small positive increases across all Florida jurisdictions.

Economic Indicator	Average Economic Impact
Employment	63,813
Output (Sales)	$13,411,500,000
Personal Income	$8,149,045,455
Gross Domestic Product	$7,165,545,455

SOURCE: REMI PI+ Florida Counties v. 2.1.0

Figure 13: Scenario 1 Economic Impact Results

According to REMI, the changes in insurance and construction production costs will result in an average increase of almost 64,000 jobs when compared to REMI's baseline forecast. The state's output will increase just above $13.4 billion and personal income by $8.1 billion. The project will also increase the state's gross regional product by about $7.2 billion. All Florida counties and regions showed small positive increases in economic activity due to these changes. Not surprisingly, the highest economic impact occurred in the largest regions: South (Miami), Tampa Bay (Tampa), and East Central (Orlando).

Conclusion

The results for the REMI modeling used to calculate and predict economic activity impacts in the state of Florida due to changes in the cost of insurance premiums and construction production costs were inconclusive due to the lack of available and sharable data.

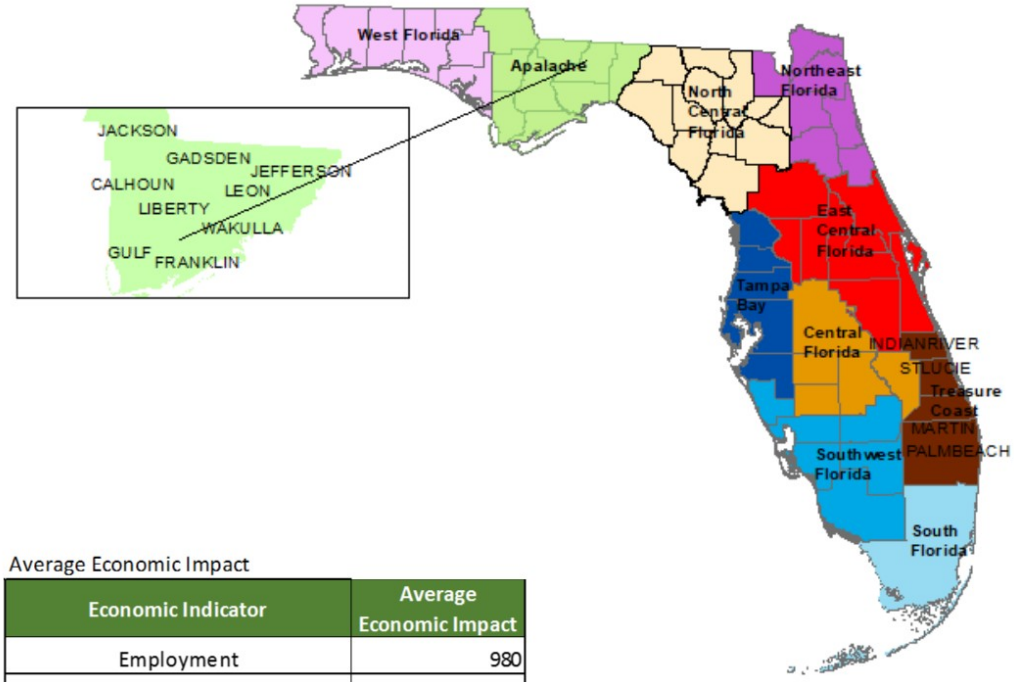
As seen throughout this study, changes in building codes could have an economic impact on both commercial and residential insurance premiums, however, further study is needed with additional work by subject matter experts to enable the showing of conclusive quantitative results.

Appendix A

Scenario 1 Economic Impact Results by Florida Region and Counties

Economic Impact of Building Code Changes for Apalachee Region

SCENARIO 1



Average Economic Impact

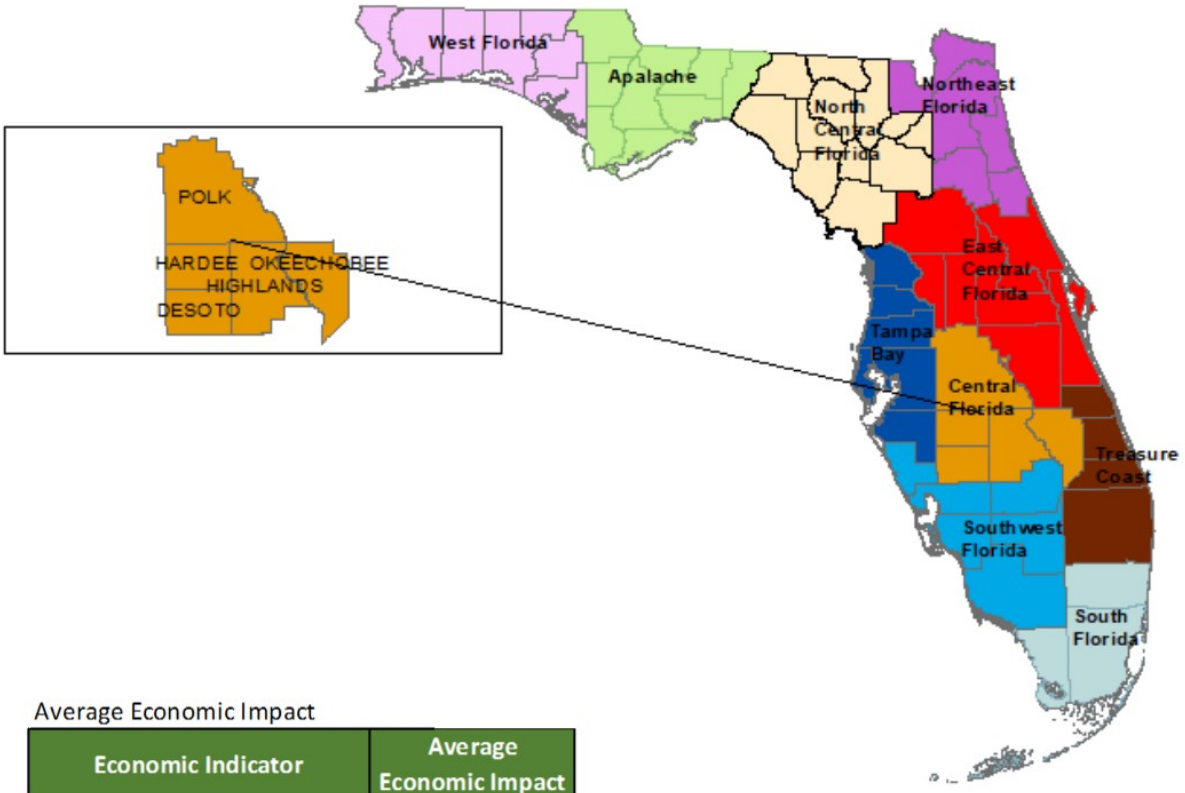
Economic Indicator	Average Economic Impact
Employment	980
Output (Sales)	$146,636,364
Personal Income	$95,318,182
Gross Domestic Product	$88,636,364

Total Economic Impact by County

Economic Indicator	Calhoun	Franklin	Gadsen	Gulf	Jackson	Jefferson	Leon	Liberty	Wakulla
Employment	16	19	80	20	73	18	706	6	43
Output (Sales)	$1,315,391	$2,626,324	$11,394,226	$2,703,484	$10,826,496	$1,611,759	$111,335,751	$586,316	$4,119,300
Personal Income	$1,323,273	$1,677,498	$9,170,015	$1,395,670	$8,333,299	$2,011,241	$65,544,596	$635,743	$5,140,578
Gross Domestic Product	$771,560	$1,611,737	$6,746,771	$1,667,146	$6,456,521	$964,870	$67,804,268	$300,308	$2,294,680

Economic Impact of Building Code Changes for Central Florida Region

SCENARIO 1



Average Economic Impact

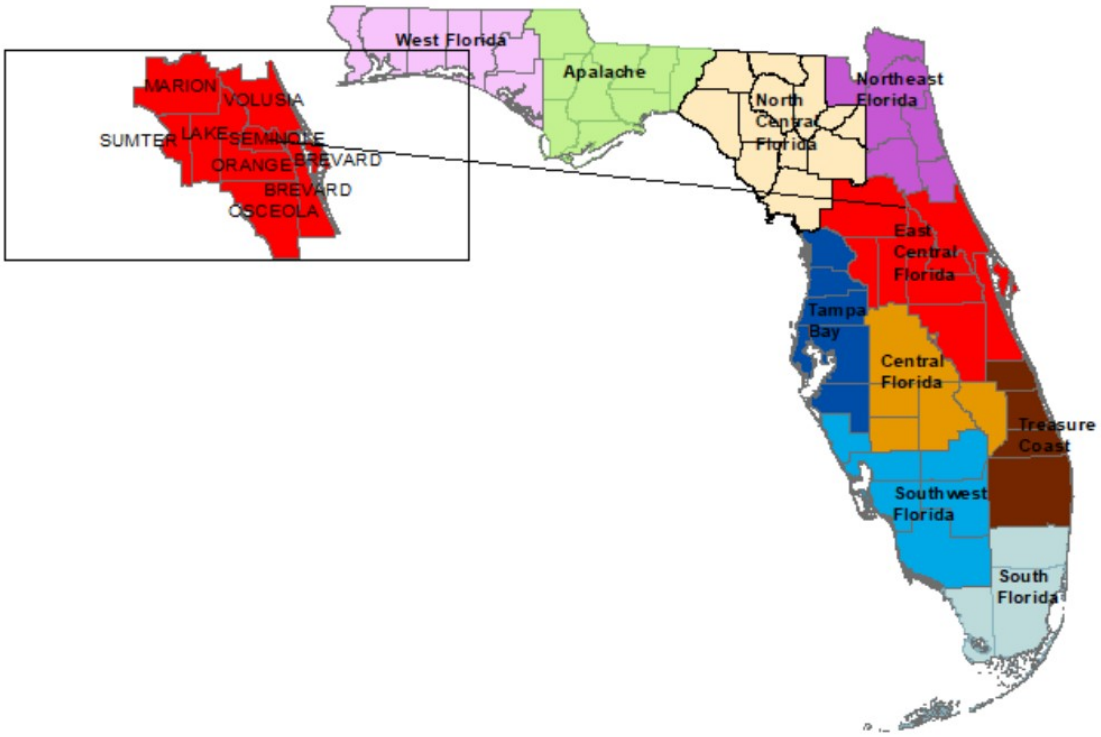
Economic Indicator	Average Economic Impact
Employment	1,962
Output (Sales)	$303,227,273
Personal Income	$158,727,273
Gross Domestic Product	$185,090,909

Total Economic Impact by County

Economic Indicator	DeSoto	Hardee	Highlands	Okeechobee	Polk
Employment	48	50	132	74	1,657
Output (Sales)	$6,892,423	$9,201,788	$19,524,555	$10,910,502	$340,758,727
Personal Income	$4,573,697	$5,218,743	$11,033,329	$7,308,652	$186,386,936
Gross Domestic Product	$3,897,825	$5,976,158	$11,808,527	$6,235,883	$194,044,543

Economic Impact of Building Code Changes for East Central Florida Region

SCENARIO 1



Average Economic Impact

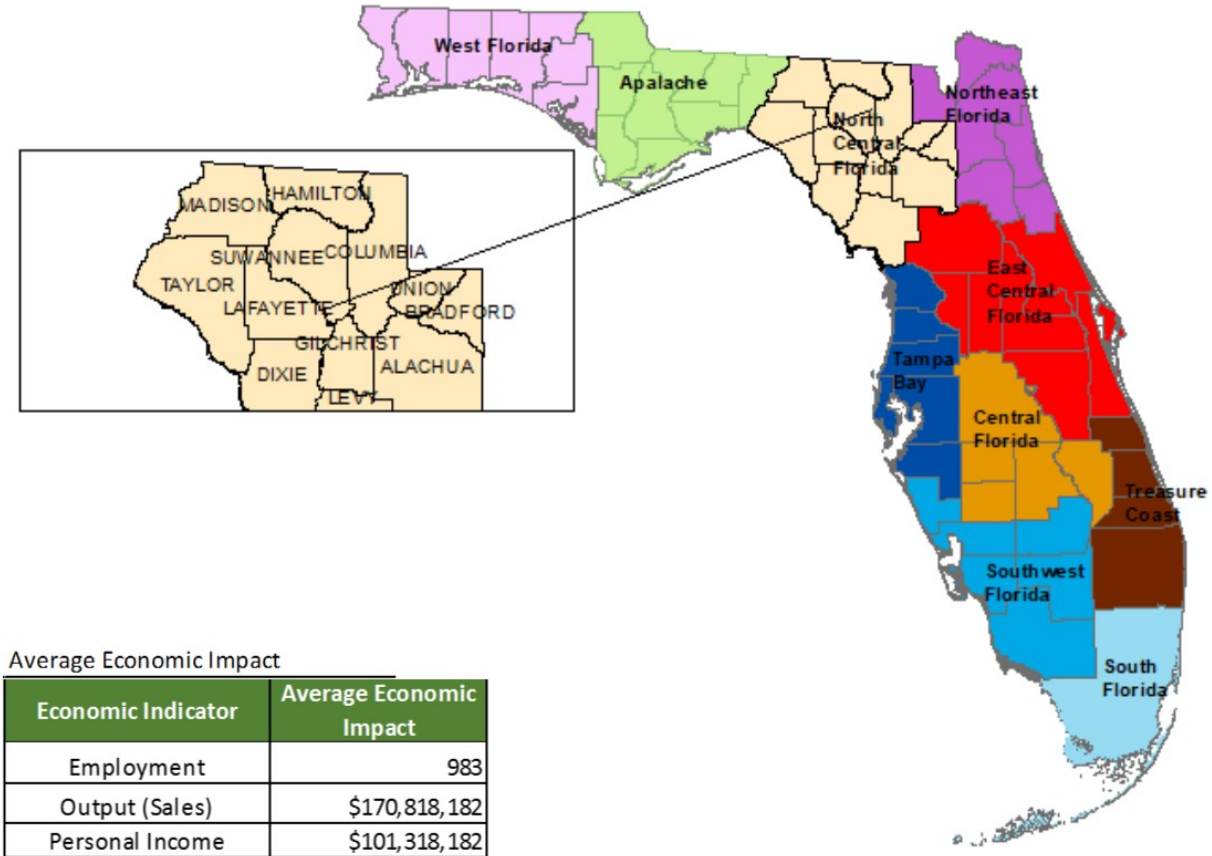
Economic Indicator	Average Economic Impact
Employment	12,352
Output (Sales)	$2,732,090,909
Personal Income	$1,256,863,636
Gross Domestic Product	$1,654,772,727

Total Economic Impact by County

Economic Indicator	Brevard	Lake	Marion	Orange	Osceola	Seminole	Sumter	Volusia
Employment	1,324	809	653	5,839	591	1,879	201	1,057
Output (Sales)	$266,795,636	$125,675,587	$110,412,834	$1,496,591,384	$120,325,082	$376,242,021	$35,123,554	$200,928,468
Personal Income	$139,686,019	$111,979,315	$63,697,977	$402,674,820	$104,724,705	$277,017,046	$25,469,862	$131,617,903
Gross Domestic Product	$151,271,280	$75,202,068	$64,015,785	$916,539,366	$77,151,150	$228,935,026	$20,981,668	$120,723,865

Economic Impact of Building Code Changes for North Central Florida Region

SCENARIO 1



Average Economic Impact

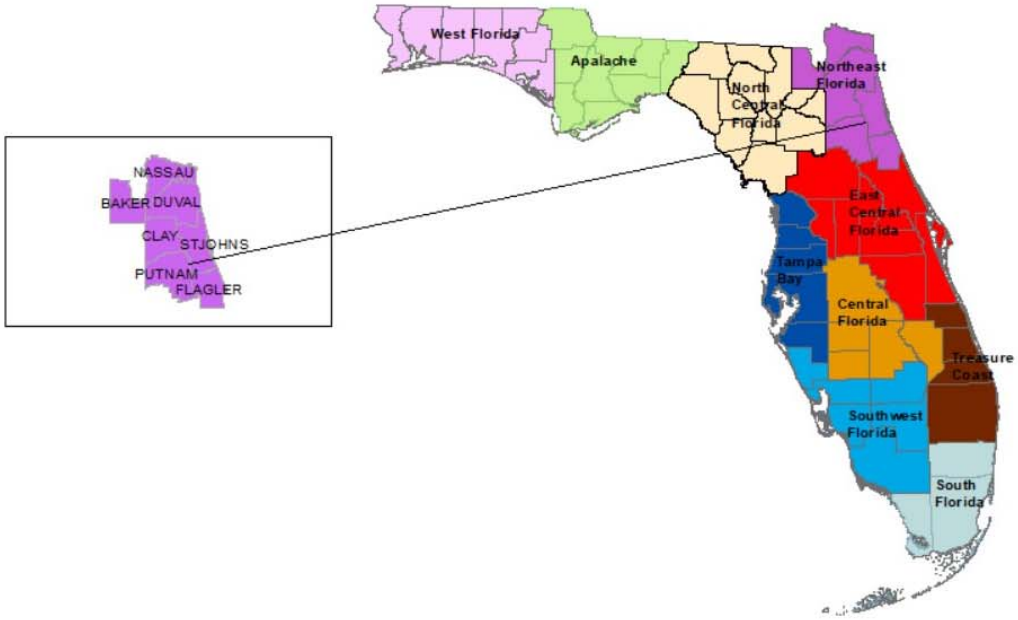
Economic Indicator	Average Economic Impact
Employment	983
Output (Sales)	$170,818,182
Personal Income	$101,318,182
Gross Domestic Product	$101,090,909

Total Economic Impact by County

Economic Indicator	Alachua	Bradford	Columbia	Dixie	Gilchrist	Hamilton	Lafayette	Levy	Madison	Taylor	Union
Employment	640	34	70	16	18	9	5	64	11	41	17
Output (Sales)	$117,789,254	$4,762,375	$13,685,240	$1,614,501	$2,407,961	$1,892,664	$546,379	$8,330,032	1,166,421	$8,428,308	$2,054,456
Personal Income	$67,023,529	$3,963,379	$5,762,573	$1,225,528	$1,679,551	$364,320	$505,027	$7,320,497	279,476	$4,871,253	$1,715,271
Gross Domestic Product	$71,581,738	$2,815,916	$7,594,811	$880,410	$1,429,376	$917,346	$311,169	$4,761,715	654,762	$4,435,248	$1,176,285

:onomic Impact of Building Code Changes for Northeast Florida Region

SCENARIO 1



Average Economic Impact

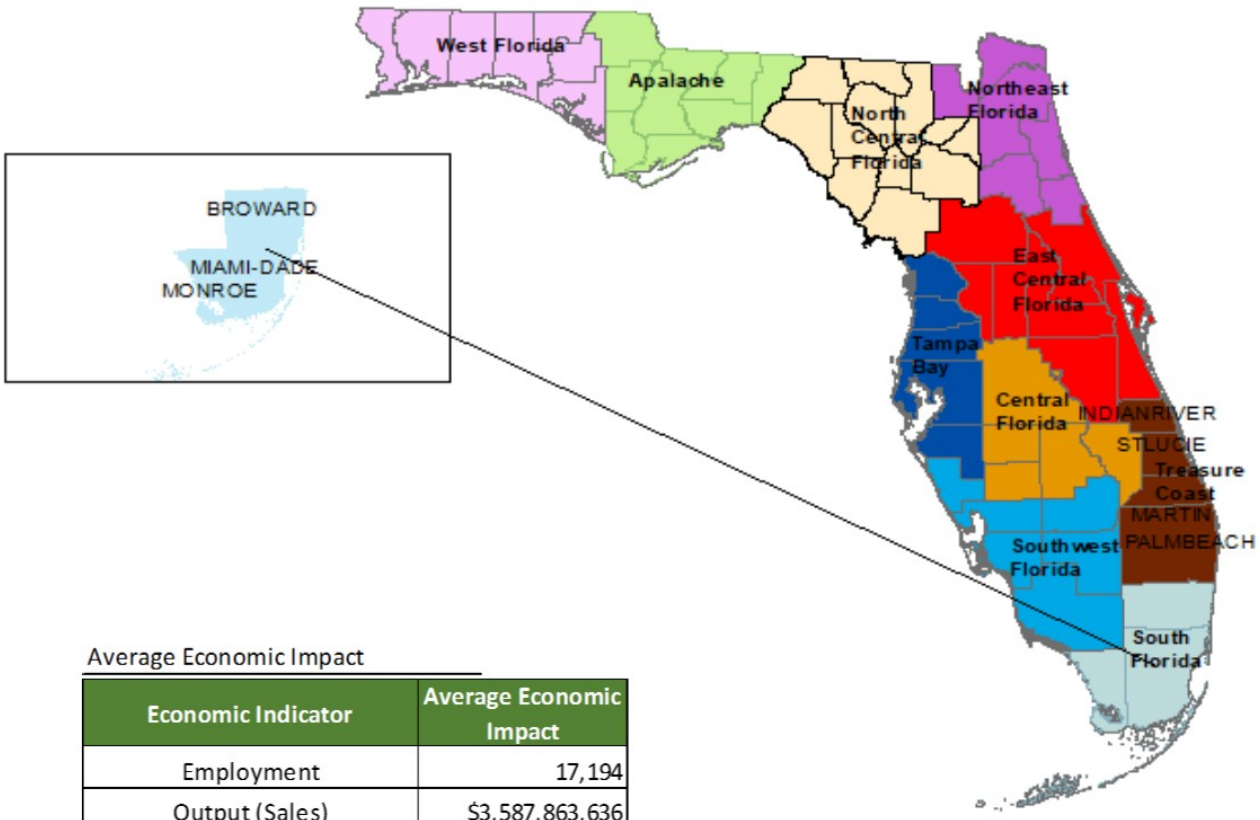
Economic Indicator	Average Economic Impact
Employment	4,866
Output (Sales)	$ 1,085,090,909
Personal Income	$ 564,954,545
Gross Domestic Product	$ 645,681,818

Total Economic Impact by County

Economic Indicator	Baker	Clay	Duval	Flagler	Nassau	Putnam	St. Johns
Employment	343	453	3,492	113	124	89	565
Output (Sales)	$69,755,089	$70,109,488	$854,800,521	$20,462,541	$20,671,657	$16,595,307	$98,398,216
Personal Income	$33,660,613	$93,724,702	$239,609,896	$22,280,706	$25,484,648	$9,909,139	$170,332,298
Gross Domestic Product	$42,811,022	$42,701,388	$506,811,707	$12,221,351	$12,223,658	$9,770,278	$59,683,287

Economic Impact of Building Code Changes for South Florida Region

SCENARIO 1



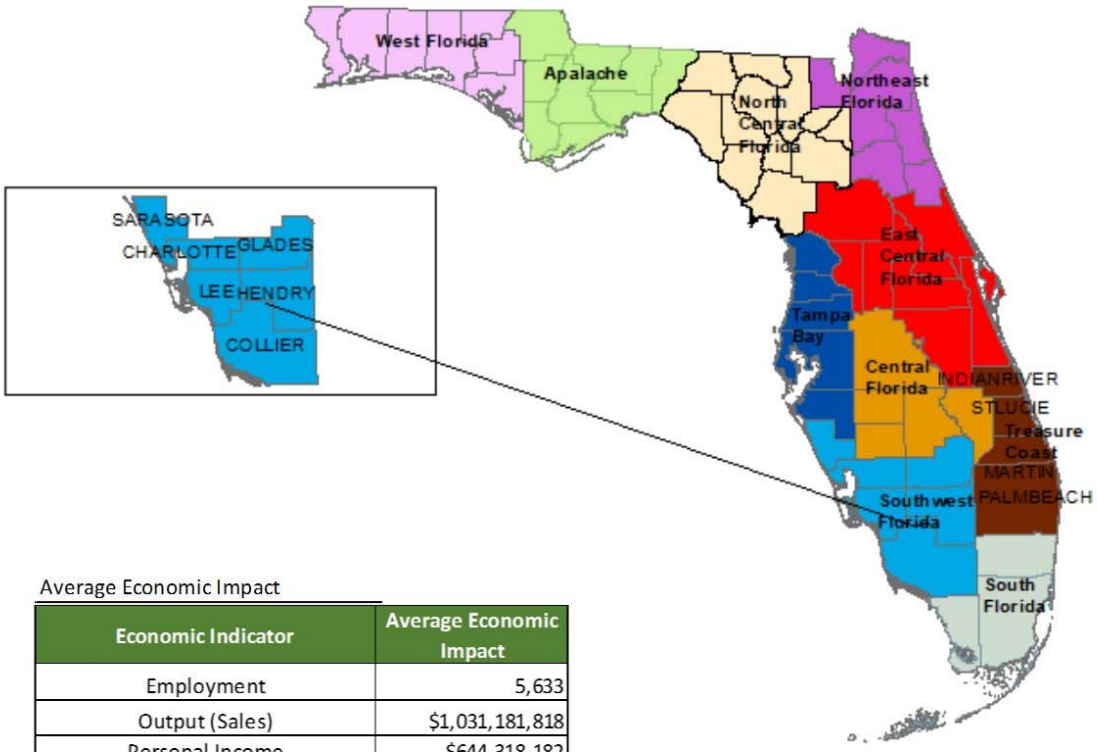
Average Economic Impact

Economic Indicator	Average Economic Impact
Employment	17,194
Output (Sales)	$3,587,863,636
Personal Income	$1,896,090,909
Gross Domestic Product	$2,202,136,364

Economic Indicator	Broward	Miami-Dade	Monroe
Employment	6,970	9,953	271
Output (Sales)	$1,494,994,938	$2,047,517,059	$45,295,850
Personal Income	$676,938,198	$1,187,493,269	$31,625,204
Gross Domestic Product	$918,872,003	$1,255,336,645	$27,925,052

Economic Impact of Building Code Changes for Southwest Region

SCENARIO 1



Average Economic Impact

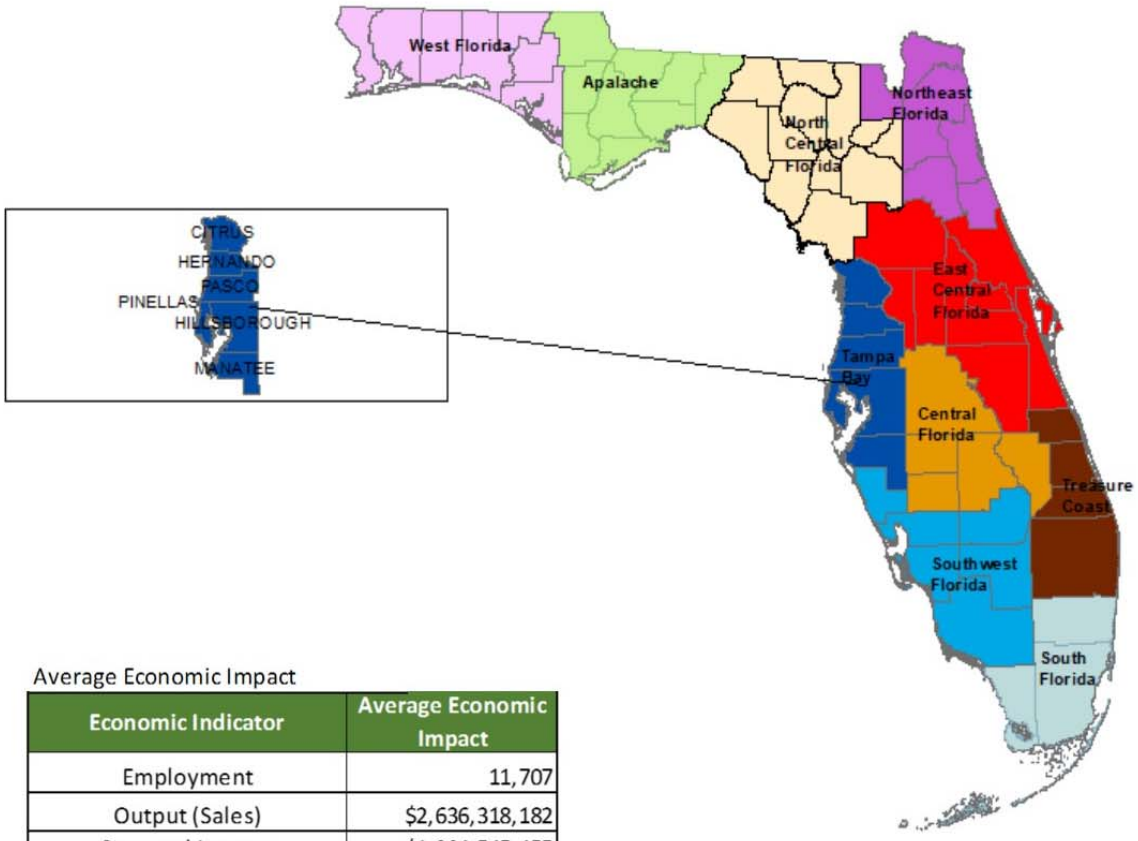
Economic Indicator	Average Economic Impact
Employment	5,633
Output (Sales)	$1,031,181,818
Personal Income	$644,318,182
Gross Domestic Product	$636,090,909

Total Economic Impact in Southwest Florida

Economic Indicator	Charlotte	Collier	Glades	Hendry	Lee	Sarasota
Employment	327	1,200	21	62	2,511	1,512
Output (Sales)	$50,011,870	$236,882,737	$1,736,526	$8,673,856	$461,064,535	$272,821,634
Personal Income	$25,908,390	$154,830,209	$1,150,078	$5,775,704	$303,218,448	$153,418,761
Gross Domestic Product	$31,084,707	$147,587,152	$1,030,667	$5,107,947	$283,823,155	$167,439,035

Economic Impact of Building Code Changes for Tampa Bay Region

SCENARIO 1



Average Economic Impact

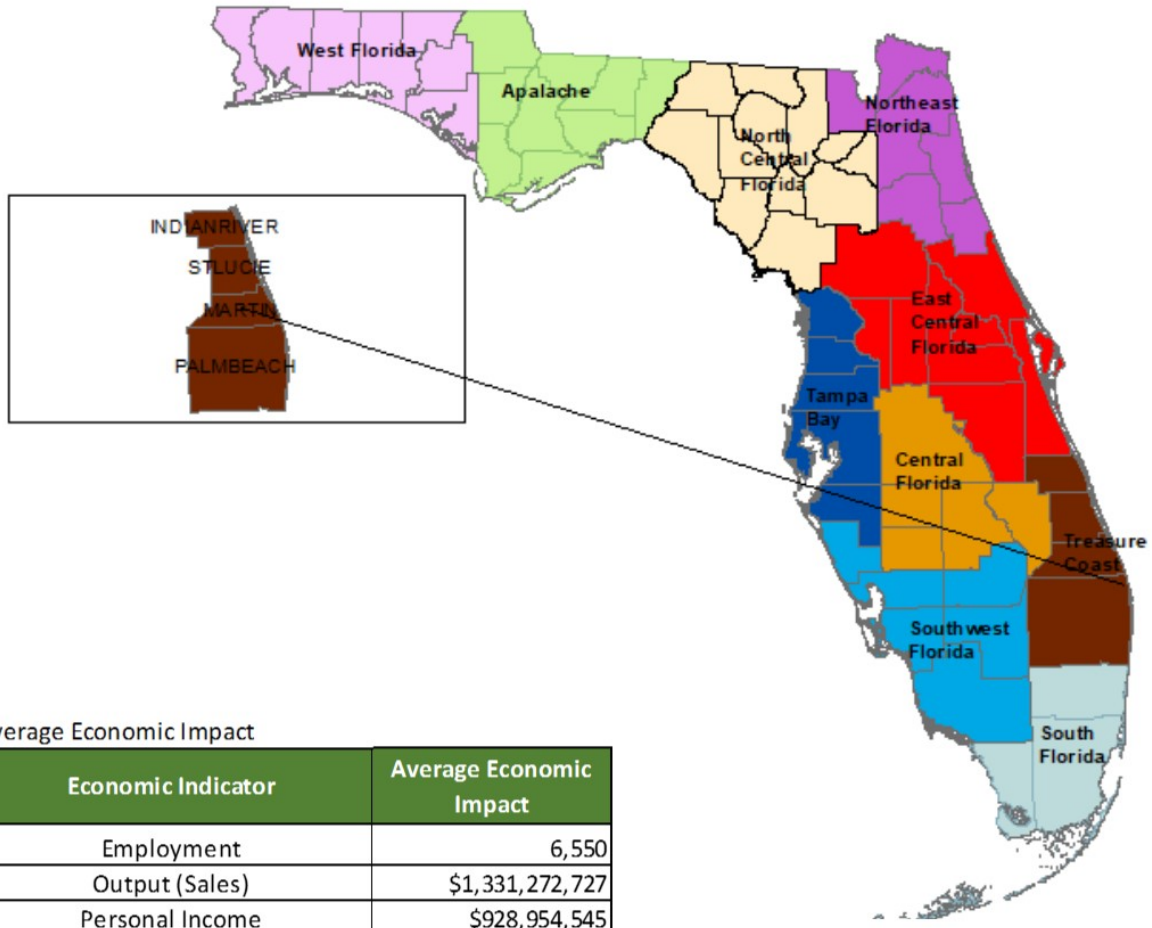
Economic Indicator	Average Economic Impact
Employment	11,707
Output (Sales)	$2,636,318,182
Personal Income	$1,304,545,455
Gross Domestic Product	$1,590,318,182

Total Economic Impact by County

Economic Indicator	Citrus	Hernando	Hillsborough	Manatee	Pasco	Pinellas
Employment	248	317	5,401	1,008	965	3,768
Output (Sales)	$40,873,554	$44,624,663	$1,394,763,997	$192,496,174	$157,203,388	$806,328,170
Personal Income	$25,876,367	$43,131,986	$524,136,204	$115,518,353	$191,925,625	$403,970,881
Gross Domestic Product	$25,982,483	$26,319,435	$845,173,850	$114,924,097	$95,836,553	$482,075,735

Economic Impact of Building Code Changes for Treasure Coast Region

SCENARIO 1



Average Economic Impact

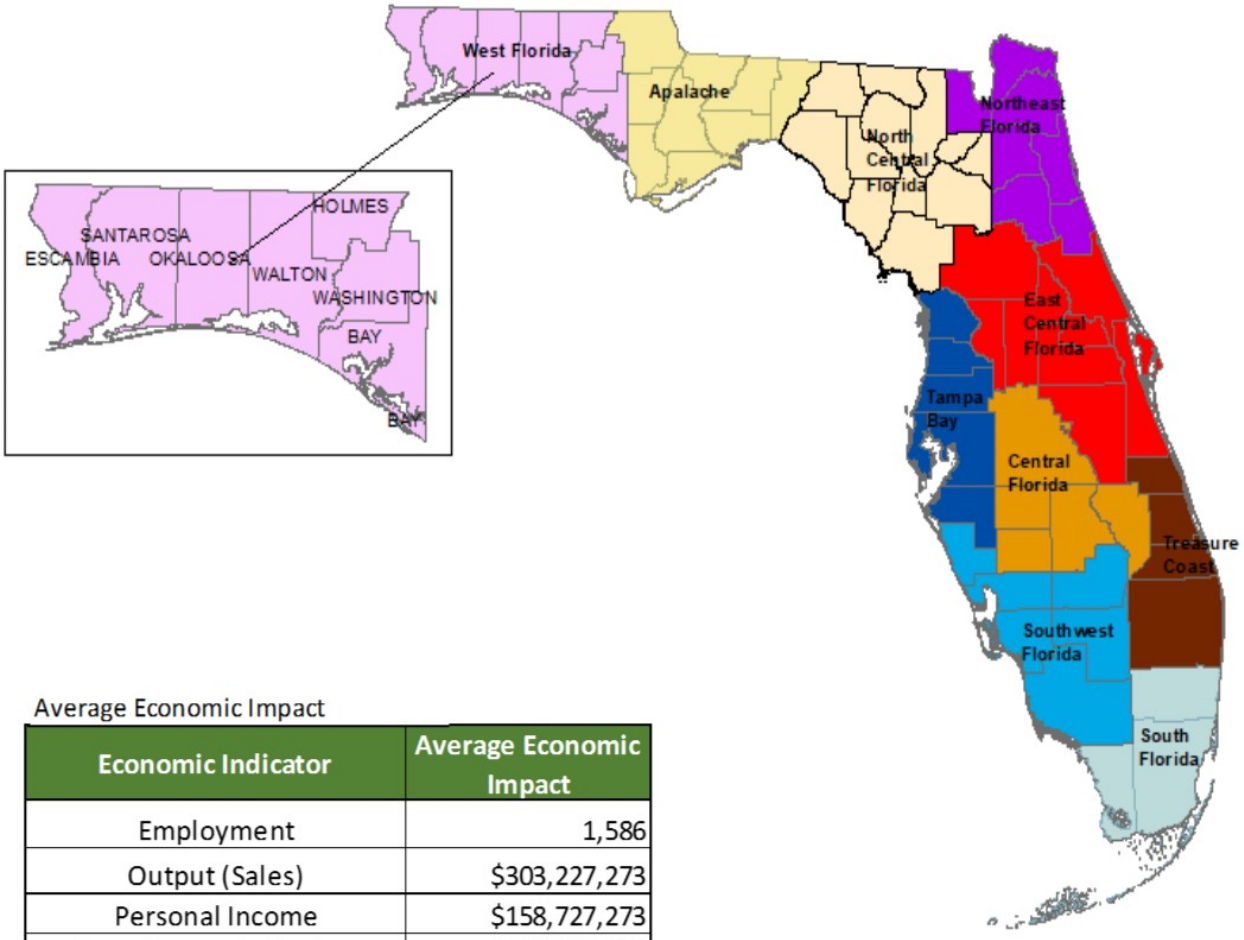
Economic Indicator	Average Economic Impact
Employment	6,550
Output (Sales)	$1,331,272,727
Personal Income	$928,954,545
Gross Domestic Product	$823,136,364

Total Economic Impact by County

Economic Indicator	Indian River	Martin	Palm Beach	St. Lucie
Employment	338	610	5,005	597
Output (Sales)	$68,101,945	$102,179,133	$1,068,674,975	$92,417,533
Personal Income	$52,833,446	$83,160,830	$706,781,202	$86,153,173
Gross Domestic Product	$41,680,555	$61,032,221	$663,953,885	$56,456,713

Economic Impact of Building Code Changes for West Florida Region

SCENARIO 1



Average Economic Impact

Economic Indicator	Average Economic Impact
Employment	1,586
Output (Sales)	$303,227,273
Personal Income	$158,727,273
Gross Domestic Product	$185,090,909

Total Economic Impact by County

Economic Indicator	Bay	Escambia	Holmes	Okaloosa	Santa Rosa	Walton	Washington
Employment	343	567	21	285	229	119	22
Output (Sales)	$69,755,089	$116,855,280	$1,937,728	$54,552,726	$33,538,353	$23,441,536	$3,073,487
Personal Income	$33,660,613	$45,868,521	$2,090,662	$17,756,150	$41,775,256	$15,406,807	$2,175,243
Gross Domestic Product	$42,811,022	$70,487,270	$1,134,763	$33,611,999	$20,524,174	$14,736,661	$1,817,095