Economic Contributions of Marine Industries in Southwest Florida

Sponsored Project Report to the West Coast Inland Navigation District

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Image of Port Manatee (www.portmanateecommercecenter.com)
Introduction

The results of an economic evaluation of marine-related activities for nine counties in southwest Florida are presented in this report, which was sponsored by the West Coast Inland Navigation District (WCIND). These counties include: Manatee, Sarasota, Charlotte, and Lee Counties (that are members of the WCIND), and adjacent coastal counties Pinellas and Hillsborough (to the north) that are also part of the federal Gulf Intra-Coastal Waterway, and, the inland counties of Hendry and Glades, which are connected through the Waterway to Lake Okeechobee (Figure 1). Some data for Collier County was included in this analysis since it is also adjacent to the WCIND from the south, but is not affiliated with the District.

The WCIND is a multi-county special taxing body enabled by federal, state, and local regulations and revenues, with a mission, “to preserve and enhance the commercial, recreational, and ecological values of District waterways” (West Coast Inland Navigation District). The WCIND engages in waterway projects that support safe navigation for both commercial and recreational boating, fishing, and beach related activities. This includes the open coastal waters of the Gulf of Mexico, the Gulf Intracoastal Waterway (GIWW), and its secondary inland waterways. Waterway projects include the maintenance and development of facilities or infrastructures such as public navigation channels and inlets, boating access facilities, waterfront parks, piers, and other special waterfront and navigational structures. The purpose of this study was to assess the overall economic value of commercial and recreational marine-related activities in the WCIND region in order to better appreciate and understand its role and importance within the region’s overall economy.
Previous Studies

The overall contributions of marine-related economic activity for the eight counties affiliated with the West Coast Inland Navigation District have not been addressed specifically in previous research. A previous study by Hodges, Stevens, Rahmani and Swett (2012) investigated marine-related economic contributions for all coastal counties in the U.S. using 2009 data from the National Ocean Economics Program (NOEP), IMPLAN (IMPLAN Group, LLC), and other sources. It found that Florida had the third largest GDP (value-added) contributions for these activities in the U.S., at $64 billion, and that three of the four largest counties in the State for marine contributions were located in southwest Florida, with Pinellas County being the largest.

A 2011 study by Swett, Adams, Larkin, Hodges, and Stevens assessed the usage and economic contributions of artificial reefs located off the coast of six counties in Southwest Florida, all of which are included in this study. Using telephone, mail, and email mediums, the authors surveyed 4,701 private boat owners, and 449 for-hire boat operators, collecting data on visitor days and expenditures in 2009. They estimated total value-added impacts to the six county region in 2009 at $138.31 million and employment impacts at 2,595 fulltime and part-time jobs.

Adams, Lindberg, and Stevely published a review of studies, up to 2011, on the economic costs and benefits of artificial reefs off Florida’s coasts. This included an inventory of reefs for each coastal county. In 2011, Florida had a total of 2,276 off-shore reefs. The four WCIND counties had 388 artificial reefs combined, and the seven WCIND and adjoining coastal counties had 944 reefs. Thus over 40 percent of the artificial reefs along Florida’s
coasts were in Counties belonging or adjacent to the WCIND. Cost-benefit studies of artificial reefs were mixed. Overall, benefits exceeded costs, but among different users, anglers appeared to benefit at the expense of divers.

In a most recent 2014 study, Savolainen, Fannin, and Caffey examined the economic impacts of the Recreation For-Hire (RFH) fishing/diving industry in the U.S. Gulf of Mexico in 2009. The authors used IMPLAN to estimate economic impacts from headboat, charter and guideboat activities on Florida’s west coast. For the State, total employment impacts for RFH operations in 2009 were estimated at 1,354 fulltime and part-time jobs. Total output or revenue impacts were calculated to be $181.4 million (in 2013 dollars), and total Labor Income impacts were estimated at $61.5 million.

Huth, Morgan, and Burkart estimated the economic impacts of fishing and diving on artificial reefs for the state of Florida in 2014 using a 2011 REMI model. Saltwater fishing impacts were based on surveys of both resident and nonresident saltwater-fishing license holders. Economic impacts from artificial reef diving were based on surveys of scuba divers. The output impacts from artificial reef related activities in 2013 for Florida as a whole were estimated at over $3 billion, and included over $1 billion of labor income, 39,000 jobs for Florida residents, and $250 million in annual State government revenues.

Murray & Associates recently estimated the economic impacts of the marine boating industry for Palm Beach, Broward, and Miami-Dade Counties in southeast Florida. This included manufacturing, wholesale, retail, dockage, and marine service-related activities. The authors estimated that gross marine sales in the tri-county area totaled $2.38 billion in 2014, and as a result of multiplier effects, generated $11.5 billion in total output impacts to the region. The estimated total employment impacts from these sales were 136,465 jobs and the total labor income impacts were $4.05 billion.

**Sources and Methods**

**Scope of Marine Industries**

The scope of marine activities evaluated in this study includes those prescribed by the National Ocean Economics Program (NOEP) as constituting the “Ocean Economy”. In their most aggregated form these activities are divided into six “super-sectors” which include: **Construction** of marine related infrastructure and facilities; **Living Resources** represented by: fishing, aquaculture, seafood processing, and seafood markets; **Offshore Minerals** - consisting of limestone, sand, and gravel mining, and, oil and gas exploration and production; **Ship and Boat Building**, which includes boat building and repair, and ship building and repair; **Tourism and Recreation**, which includes a variety of accommodations and services associated with recreation in coastal areas, such as marinas, boat dealers, amusement and recreational facilities, hotels, restaurants, and sporting goods retailers, and, finally; **Transportation**, which includes marine passenger and cargo transportation services, and, search and navigation equipment.
County-level data on marine construction, and, tourism and recreation were not available for this study. However, in place of tourism and recreation generally, this study used data on recreational fishing expenditures within the WCIND. These activities include numerous economic sectors that are identified in a list of marine NAICS and IMPLAN industry groups and component sectors provided below in Table 1.
<table>
<thead>
<tr>
<th>Marine Industry Group</th>
<th>Marine Industry Sector</th>
<th>NAICS Code</th>
<th>NAICS Industry Name (2012 NAICS)</th>
<th>IMPLAN Code</th>
<th>IMPLAN Sector Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Living Resources</td>
<td>Fish Hatcheries &amp; Aquaculture</td>
<td>1125</td>
<td>Finfish &amp; shellfish farming &amp; hatcheries</td>
<td>14</td>
<td>Animal prod., except cattle, poultry &amp; eggs</td>
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<tr>
<td></td>
<td>Fishing</td>
<td>1141</td>
<td>Finfish &amp; shellfish fishing</td>
<td>17</td>
<td>Commercial fishing</td>
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<tr>
<td></td>
<td>Seafood Processing</td>
<td>3117</td>
<td>Seafood product preparation &amp; packaging</td>
<td>93</td>
<td>Seafood product preparation &amp; packaging</td>
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<tr>
<td></td>
<td>Seafood Markets</td>
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<td>Fish &amp; seafood markets</td>
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<td>Food &amp; beverage stores</td>
</tr>
<tr>
<td>Ship &amp; Boat Building &amp; Repair</td>
<td>Boat Building &amp; Repair</td>
<td>336612</td>
<td>Boat building</td>
<td>364</td>
<td>Boat building</td>
</tr>
<tr>
<td>Ship &amp; Boat Building &amp; Repair</td>
<td>Ship Building &amp; Repair</td>
<td>336611</td>
<td>Ship building &amp; repairing</td>
<td>363</td>
<td>Ship building &amp; repairing</td>
</tr>
<tr>
<td>Marine Transportation</td>
<td>Deep Sea Freight</td>
<td>483111</td>
<td>Deep sea freight transp.</td>
<td>410</td>
<td>Water transportation</td>
</tr>
<tr>
<td>Marine Transportation</td>
<td>Transportation</td>
<td>483113</td>
<td>Coastal &amp; Great Lakes freight transportation</td>
<td>410</td>
<td>Water transportation</td>
</tr>
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<td>Marine Transportation</td>
<td>Marine Passenger</td>
<td>483112</td>
<td>Deep sea passenger transp.</td>
<td>410</td>
<td>Water transportation</td>
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<td>Transportation</td>
<td>483114</td>
<td>Coastal &amp; Great Lakes passenger transportation</td>
<td>410</td>
<td>Water transportation</td>
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<td>Marinas</td>
<td>713930</td>
<td>Marinas</td>
<td>496</td>
<td>Other amusement &amp; recreation industries</td>
</tr>
<tr>
<td>Marine Transportation</td>
<td>Marine Transportation  Services</td>
<td>4883</td>
<td>Support activities for water transportation</td>
<td>414</td>
<td>Scenic &amp; sightseeing transp., &amp; support activities for transp.</td>
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<td>Search &amp; Navigation Equipment</td>
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<td>315</td>
<td>Search, detection, &amp; navigation instruments manufacturing</td>
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<td>Boat Dealers</td>
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<td>Motor vehicle &amp; parts dealers</td>
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<td>Eating &amp; Drinking Places</td>
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<td>Full-Service restaurants except casino hotels &amp; motels</td>
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<td>Full-service restaurants</td>
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<td>Eating &amp; Drinking Places</td>
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<td>Limited-service restaurants</td>
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<td>Limited-service restaurants</td>
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<td>Eating &amp; Drinking Places</td>
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<td>Cafeterias, gill buffets, &amp; buffets</td>
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<td>All other food &amp; drinking places</td>
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<td>Eating &amp; Drinking Places</td>
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<td>Snack &amp; nonalcoholic beverage bars</td>
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<td>Hotels (except casino hotels &amp; motels)</td>
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<td>Hotels &amp; motels, including casino hotels</td>
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<td>Places</td>
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<td>Bed-&amp;-Breakfast Inns</td>
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<td>Other accommodations</td>
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<td>Tourism &amp; Recreation, Coastal</td>
<td>RV Parks &amp; Campsites</td>
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<td>RV (recreational vehicle) parks &amp; campgrounds</td>
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<td>Other accommodations</td>
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<td>Scenic &amp; sightseeing transp. &amp; support act. for transp.</td>
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<td>Amusement &amp;</td>
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<td>Scenic &amp; sightseeing transp., other</td>
<td>414</td>
<td>Scenic &amp; sightseeing transp. &amp; support act. for transp.</td>
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<td>Recreation Services</td>
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<td>Sports &amp; recreation instruction</td>
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<td>Other educational services</td>
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<td>532292</td>
<td>Recreational goods rental</td>
<td>443</td>
<td>General &amp; consumer goods rental except video tapes &amp; discs</td>
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<td></td>
<td></td>
<td>713990</td>
<td>All Other Amusement &amp; Recreation Industries</td>
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<td>Other amusement &amp; recreation industry.</td>
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<td></td>
<td>Zoos and Aquaria</td>
<td>712130</td>
<td>Zoos &amp; botanical gardens</td>
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<td>Museums, historical sites, zoos, &amp; parks</td>
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<td></td>
<td></td>
<td>712190</td>
<td>Nature parks &amp; other similar institutions</td>
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<td>Museums, historical sites, zoos, &amp; parks</td>
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Continued, on next page.
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<tr>
<th>Marine Related Construction</th>
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<th>Residential maintenance &amp; repair</th>
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<th>Remodeling and renovating, residential building</th>
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<td>Seafood product preparation &amp; packaging</td>
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<td>Retail Stores</td>
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<td>445</td>
<td>447</td>
<td>448</td>
<td>451</td>
<td>453</td>
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<td>485</td>
<td>487, 488</td>
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<td>81111-2, 811191, 811198</td>
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<tr>
<td>441</td>
<td></td>
<td>Motor vehicle (boat) and parts</td>
<td></td>
<td>Automotive repair &amp; maintenance</td>
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<tr>
<td>441</td>
<td></td>
<td>dealers</td>
<td></td>
<td></td>
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<tr>
<td>441</td>
<td></td>
<td>Transit &amp; Ground Passenger Transp.</td>
<td></td>
<td>Automotive repair &amp; maintenance</td>
</tr>
<tr>
<td>441</td>
<td></td>
<td>Scenic &amp; sightseeing transp. &amp;</td>
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<td>441</td>
<td></td>
<td>support activities</td>
<td></td>
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<td></td>
<td>396</td>
<td></td>
<td></td>
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<tr>
<td>441</td>
<td></td>
<td>Motor vehicle and parts dealers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>441</td>
<td></td>
<td>Transit &amp; ground passenger transp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>441</td>
<td></td>
<td>Scenic &amp; sightseeing transportation &amp; support activities for transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>441</td>
<td></td>
<td>Automotive repair &amp; maintenance, except car washes</td>
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<td></td>
</tr>
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<td>Periodical publishers</td>
<td>418</td>
<td>Periodical publishers</td>
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<td>437</td>
<td>Insurance carriers</td>
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<td>Agencies, brokerages, and other insurance related activities</td>
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<td></td>
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<td>531</td>
<td></td>
<td>Real estate</td>
<td>440</td>
<td>Real estate</td>
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<td>Rental Equipment</td>
<td>5321</td>
<td>Automotive equipment rental &amp; leasing</td>
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<td>Automotive equipment rental &amp; leasing</td>
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<td>532221-2, 53229, 5323</td>
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<td>General &amp; consumer goods rental</td>
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<td>General &amp; consumer goods rental except video tapes &amp; discs</td>
</tr>
<tr>
<td>Miscellaneous</td>
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<td>Promoters, managers &amp; agents of performing arts, sports, &amp; public figures</td>
<td>491</td>
<td>Promoters of performing arts &amp; sports &amp; agents for public figures</td>
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<tr>
<td>7115</td>
<td></td>
<td>Independent artists, writers, &amp; performers</td>
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<td>Independent artists, writers, &amp; performers</td>
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<tr>
<td>71391-3, 71399</td>
<td></td>
<td>Golf, marinas, &amp; other amusement &amp; recreation industries</td>
<td>496</td>
<td>Other amusement &amp; recreation industries</td>
</tr>
<tr>
<td>722511</td>
<td></td>
<td>Full-service restaurants</td>
<td>501</td>
<td>Full-service restaurants</td>
</tr>
<tr>
<td>8129</td>
<td></td>
<td>Other personal services</td>
<td>512</td>
<td>Other personal services</td>
</tr>
<tr>
<td>Employment &amp; Payroll</td>
<td>NA</td>
<td></td>
<td>531</td>
<td>Employment &amp; payroll of state govt., non-education</td>
</tr>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td>533</td>
<td>Employment &amp; payroll of local govt., non-education</td>
</tr>
</tbody>
</table>

Source: USDOC-Census Bureau and IMPLAN Group, LLC.

**Data Analysis Procedures**

Estimating the regional economic contributions or impacts of a particular set of industries or activities requires data on the number of jobs and the magnitude of revenues directly generated by the activities being examined within the region of interest. Once these data are acquired, impacts can be estimated by applying the appropriate economic multipliers for those industries. These multipliers represent the secondary (indirect and induced) impacts that occur as the revenues and earnings created by the initial direct activity are respent by businesses for inputs and supplies, and by employees or proprietors for household living expenses, and by local, state and federal
government institutions through tax and fee collections. The most recent data for ocean related activity in the region was 2013, and the geographic units for those data are the counties affiliated or adjacent with the WCIND. A glossary of economic impact terms and concepts is provided in Appendix A, at the end of this report.

**Regional I-O/SAM Modeling**

Economic multipliers for the nine counties in the expanded WCIND region were estimated using the IMPLAN input-output analysis software (version 3.1) and county datasets for 2013 (IMPLAN Group LLC.), and are given in Table 2. The IMPLAN models built using this software and data were constructed using the Regional Purchase Coefficients methodology. Social accounts for households, local/state and federal governments that were included and treated as endogenous to the models. Economic multipliers from these models not only capture the direct effects of industry activities, but also the input purchases associated with supply chain activities (known as “indirect” effects), the induced effects from employee and proprietor household spending of earning and profits, and, government spending. The total regional economic contributions represent the sum of these direct, indirect and induced effects. Economic multipliers were applied for employment (fulltime and part-time jobs), wages (labor income, including employee compensation and business proprietor or owner income), and Gross Domestic Product (value added). Ocean sector economic activity was assumed to represent new final demand to the respective regions by virtue of its proximity to the coastal resource. Total output and employment multipliers for the relevant marine sectors in each of the nine counties in the region are presented in Table 2.

A complicating factor in isolating marine related activities from the rest of the WCIND county economies is that the six-sector, county-level Ocean Economy data is much more aggregated than the 536 sector set of IMPLAN multipliers. Fortunately, the 23-industry state-level Ocean economy dataset in the NOEP database is very similar to the IMPLAN multiplier scheme, and a bridge-table between these schemes and the North American Industry Classification Scheme (NAICS) is available in the NOEP “Data Guide” (Colgan, 2007). This bridge table allows one to subdivide or disaggregate economic data into a more refined set of economic sectors for impact analysis. Table 1 represents an adaptation of Colgan’s bridge table that includes an additional bridge between the 23 sector NAICS designations and the IMPLAN 536 sector scheme. By using this bridge table, disaggregated industry data was imputed for coastal counties so that it could then be applied to the IMPLAN multipliers to estimate the county-level contributions of ocean industries.
<table>
<thead>
<tr>
<th>Sector Code</th>
<th>Industry Sector</th>
<th>Charlotte</th>
<th>Collier</th>
<th>Glades</th>
<th>Hendry</th>
<th>Hillsborough</th>
<th>Lee</th>
<th>Manatee</th>
<th>Pinellas</th>
<th>Sarasota</th>
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</thead>
<tbody>
<tr>
<td>14</td>
<td>Animal prod., except cattle &amp; poultry &amp; eggs</td>
<td>1.823</td>
<td>1.989</td>
<td>1.457</td>
<td>1.734</td>
<td>2.250</td>
<td>1.979</td>
<td>2.037</td>
<td>2.285</td>
<td>2.102</td>
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<td>17</td>
<td>Commercial fishing</td>
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<td>2.057</td>
<td>0.000</td>
<td>1.805</td>
<td>2.387</td>
<td>2.105</td>
<td>2.005</td>
<td>2.362</td>
<td>2.190</td>
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<td>63</td>
<td>Maintenance &amp; repair construction of residential structures</td>
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<td>2.043</td>
<td>1.443</td>
<td>1.727</td>
<td>2.350</td>
<td>2.120</td>
<td>2.181</td>
<td>2.449</td>
<td>2.282</td>
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<td>93</td>
<td>Seafood product preparation &amp; packaging</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.844</td>
<td>1.620</td>
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<td>315</td>
<td>Search, detection, &amp; navigation instruments manufacturing</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<td>Ship building &amp; repairing</td>
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<td>0.000</td>
<td>2.061</td>
<td>1.996</td>
<td>1.934</td>
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<td>1.995</td>
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<td>364</td>
<td>Boat building</td>
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<td>0.000</td>
<td>0.000</td>
<td>1.509</td>
<td>1.949</td>
<td>1.922</td>
<td>1.835</td>
<td>2.197</td>
<td>1.852</td>
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<td>396</td>
<td>Retail - Motor vehicle &amp; parts dealers</td>
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<td>2.204</td>
<td>1.517</td>
<td>1.868</td>
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<td>2.268</td>
<td>2.289</td>
<td>2.618</td>
<td>2.411</td>
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<td>400</td>
<td>Retail - Food &amp; beverage stores</td>
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<td>1.842</td>
<td>2.398</td>
<td>2.258</td>
<td>2.276</td>
<td>2.538</td>
<td>2.386</td>
</tr>
<tr>
<td>402</td>
<td>Retail - Gasoline stores</td>
<td>2.043</td>
<td>2.236</td>
<td>1.552</td>
<td>1.881</td>
<td>2.501</td>
<td>2.322</td>
<td>2.328</td>
<td>2.640</td>
<td>2.438</td>
</tr>
<tr>
<td>403</td>
<td>Retail - Clothing &amp; clothing accessories. stores</td>
<td>2.004</td>
<td>2.194</td>
<td>1.527</td>
<td>1.868</td>
<td>2.456</td>
<td>2.277</td>
<td>2.290</td>
<td>2.583</td>
<td>2.392</td>
</tr>
<tr>
<td>404</td>
<td>Retail - Sporting goods, hobby, musical instrument &amp; book stores</td>
<td>2.023</td>
<td>2.212</td>
<td>1.523</td>
<td>1.882</td>
<td>2.465</td>
<td>2.291</td>
<td>2.305</td>
<td>2.612</td>
<td>2.414</td>
</tr>
<tr>
<td>406</td>
<td>Retail - Miscellaneous store retailers</td>
<td>2.067</td>
<td>2.257</td>
<td>1.568</td>
<td>1.901</td>
<td>2.482</td>
<td>2.332</td>
<td>2.359</td>
<td>2.674</td>
<td>2.468</td>
</tr>
<tr>
<td>410</td>
<td>Water transp.</td>
<td>1.738</td>
<td>1.875</td>
<td>0.000</td>
<td>0.000</td>
<td>2.140</td>
<td>1.957</td>
<td>1.919</td>
<td>2.159</td>
<td>2.127</td>
</tr>
<tr>
<td>412</td>
<td>Transp &amp; ground passenger transp.</td>
<td>1.973</td>
<td>2.152</td>
<td>0.000</td>
<td>1.697</td>
<td>2.428</td>
<td>2.189</td>
<td>2.182</td>
<td>2.536</td>
<td>2.353</td>
</tr>
<tr>
<td>414</td>
<td>Scenic &amp; sightseeing transp. &amp; support activities for transp.</td>
<td>1.938</td>
<td>2.104</td>
<td>0.000</td>
<td>1.777</td>
<td>2.364</td>
<td>2.160</td>
<td>2.212</td>
<td>2.437</td>
<td>2.269</td>
</tr>
<tr>
<td>418</td>
<td>Periodical publishers</td>
<td>1.886</td>
<td>2.051</td>
<td>0.000</td>
<td>0.000</td>
<td>2.335</td>
<td>2.141</td>
<td>2.127</td>
<td>2.463</td>
<td>2.255</td>
</tr>
<tr>
<td>437</td>
<td>Insurance carriers</td>
<td>2.082</td>
<td>2.205</td>
<td>0.000</td>
<td>1.923</td>
<td>2.497</td>
<td>2.257</td>
<td>2.253</td>
<td>2.651</td>
<td>2.404</td>
</tr>
<tr>
<td>438</td>
<td>Insurance agencies, brokersages, &amp; related activities</td>
<td>2.161</td>
<td>2.282</td>
<td>1.797</td>
<td>1.993</td>
<td>2.462</td>
<td>2.320</td>
<td>2.329</td>
<td>2.636</td>
<td>2.439</td>
</tr>
<tr>
<td>440</td>
<td>Real estate</td>
<td>1.943</td>
<td>2.081</td>
<td>1.501</td>
<td>1.782</td>
<td>2.357</td>
<td>2.154</td>
<td>2.160</td>
<td>2.438</td>
<td>2.274</td>
</tr>
<tr>
<td>442</td>
<td>Automotive equipment rental &amp; leasing</td>
<td>1.958</td>
<td>2.151</td>
<td>0.000</td>
<td>0.000</td>
<td>2.424</td>
<td>2.168</td>
<td>2.165</td>
<td>2.498</td>
<td>2.318</td>
</tr>
<tr>
<td>443</td>
<td>Gen. &amp; consumer goods rental except video tapes &amp; discs</td>
<td>2.036</td>
<td>2.271</td>
<td>1.530</td>
<td>1.868</td>
<td>2.458</td>
<td>2.313</td>
<td>2.318</td>
<td>2.674</td>
<td>2.430</td>
</tr>
<tr>
<td>491</td>
<td>Promoters of perf. arts &amp; sports &amp; agents for public figures</td>
<td>1.951</td>
<td>2.240</td>
<td>0.000</td>
<td>0.000</td>
<td>2.427</td>
<td>2.187</td>
<td>2.200</td>
<td>2.589</td>
<td>2.323</td>
</tr>
<tr>
<td>492</td>
<td>Independent artists, writers, &amp; performers</td>
<td>1.824</td>
<td>2.203</td>
<td>1.395</td>
<td>1.724</td>
<td>2.481</td>
<td>2.118</td>
<td>2.176</td>
<td>2.550</td>
<td>2.208</td>
</tr>
<tr>
<td>496</td>
<td>Other amusement &amp; recreation industries</td>
<td>1.928</td>
<td>2.126</td>
<td>1.474</td>
<td>1.746</td>
<td>2.329</td>
<td>2.175</td>
<td>2.175</td>
<td>2.487</td>
<td>2.296</td>
</tr>
<tr>
<td>501</td>
<td>Full-service restaurants</td>
<td>1.870</td>
<td>2.096</td>
<td>1.431</td>
<td>1.764</td>
<td>2.286</td>
<td>2.142</td>
<td>2.156</td>
<td>2.446</td>
<td>2.236</td>
</tr>
<tr>
<td>504</td>
<td>Automotive repair &amp; maintenance, except car washes</td>
<td>1.998</td>
<td>2.186</td>
<td>1.489</td>
<td>1.823</td>
<td>2.363</td>
<td>2.205</td>
<td>2.231</td>
<td>2.571</td>
<td>2.335</td>
</tr>
<tr>
<td>512</td>
<td>Other personal services</td>
<td>1.984</td>
<td>2.161</td>
<td>0.000</td>
<td>1.788</td>
<td>2.403</td>
<td>2.209</td>
<td>2.211</td>
<td>2.542</td>
<td>2.330</td>
</tr>
<tr>
<td>531</td>
<td>Employment &amp; payroll of state govt., non-education</td>
<td>1.991</td>
<td>2.166</td>
<td>1.478</td>
<td>1.812</td>
<td>2.308</td>
<td>2.158</td>
<td>2.222</td>
<td>2.529</td>
<td>2.346</td>
</tr>
<tr>
<td>533</td>
<td>Employment &amp; payroll of local govt., non-education</td>
<td>1.997</td>
<td>2.175</td>
<td>1.478</td>
<td>1.812</td>
<td>2.307</td>
<td>2.174</td>
<td>2.223</td>
<td>2.578</td>
<td>2.352</td>
</tr>
</tbody>
</table>
Table 2. Summary of IMPLAN output and employment multipliers for southwest Florida counties (2013)

<table>
<thead>
<tr>
<th>Sector Code</th>
<th>Industry Sector</th>
<th>Charlotte</th>
<th>Collier</th>
<th>Glades</th>
<th>Hendry</th>
<th>Hillsborough</th>
<th>Lee</th>
<th>Manatee</th>
<th>Pinellas</th>
<th>Sarasota</th>
</tr>
</thead>
<tbody>
<tr>
<td>406</td>
<td>Retail - Miscellaneous store retailers</td>
<td>39.331</td>
<td>34.901</td>
<td>48.831</td>
<td>40.921</td>
<td>34.991</td>
<td>36.733</td>
<td>40.254</td>
<td>40.200</td>
<td>38.113</td>
</tr>
<tr>
<td>410</td>
<td>Water transp.</td>
<td>8.350</td>
<td>8.111</td>
<td>0.000</td>
<td>0.000</td>
<td>9.690</td>
<td>8.992</td>
<td>9.078</td>
<td>10.591</td>
<td>9.826</td>
</tr>
<tr>
<td>414</td>
<td>Scenic &amp; sightseeing transp. &amp; support activities for transp.</td>
<td>17.654</td>
<td>15.760</td>
<td>0.000</td>
<td>17.081</td>
<td>17.207</td>
<td>15.385</td>
<td>16.303</td>
<td>19.523</td>
<td>18.289</td>
</tr>
<tr>
<td>418</td>
<td>Periodicals publishers</td>
<td>11.797</td>
<td>11.255</td>
<td>0.000</td>
<td>0.000</td>
<td>13.410</td>
<td>12.646</td>
<td>13.100</td>
<td>14.757</td>
<td>13.511</td>
</tr>
<tr>
<td>438</td>
<td>Insurance agencies, brokerages, &amp; related activities</td>
<td>17.281</td>
<td>16.481</td>
<td>15.711</td>
<td>15.844</td>
<td>16.014</td>
<td>17.031</td>
<td>17.503</td>
<td>18.634</td>
<td>17.000</td>
</tr>
<tr>
<td>442</td>
<td>Automotive equipment rental &amp; leasing</td>
<td>12.775</td>
<td>13.191</td>
<td>0.000</td>
<td>0.000</td>
<td>16.016</td>
<td>15.002</td>
<td>14.961</td>
<td>17.523</td>
<td>15.223</td>
</tr>
<tr>
<td>491</td>
<td>Independent artists, writers, &amp; performers</td>
<td>33.322</td>
<td>21.894</td>
<td>0.000</td>
<td>0.000</td>
<td>26.132</td>
<td>27.940</td>
<td>28.060</td>
<td>32.440</td>
<td>30.509</td>
</tr>
<tr>
<td>512</td>
<td>Other personal services</td>
<td>24.034</td>
<td>25.434</td>
<td>0.000</td>
<td>24.269</td>
<td>28.585</td>
<td>24.923</td>
<td>24.257</td>
<td>27.951</td>
<td>28.277</td>
</tr>
</tbody>
</table>

Employment multipliers are denominated in fulltime and part-time jobs per million dollars final demand (output).
Source: IMPLAN Group, LLC (2015)
Results

Regional profile

Population

Over the 45 year period between 1969 and 2013, the expanded WCIND region of Southwest Florida (including Collier County) has experienced population growth very similar to that of Florida as a whole. As a result, the region has consistently represented about 21 percent of the State’s population. The region’s average annual population growth rate between 1969 and 2013 was 2.49 percent, but has varied from as high as 6.52 percent in 1973 to as low as 0.52 percent in 2009. The consequence of this growth is that the region’s population has more than tripled since 1969, to 4.17 million in 2013 (Figure 2). As with the State, the region’s average annual rate of growth slowed to 1.16 percent between 2004 and 2013. But even at this reduced rate, it is gaining over 50,000 new residents each year. Lee County (Ft. Myers), Hillsborough County (Tampa) and Manatee County (Bradenton) have experienced the fastest growth in the region since 2004, while Pinellas, Hendry and Charlotte counties have seen the slowest growth (Figure 3).

Figure 2. Population trend in southwest Florida, 1969–2013

Employment

Employment trends in the expanded WCIND region (including Collier County) have been more volatile than population. From 2001 through 2013, annual growth in employment for the region averaged 0.98 percent per year, but ranged from a high of 4.57 percent in 2004, to a low of -4.50 percent in 2008 (Figure 4). The total number of jobs in the region during 2013 (2,349,209) was still below the peak of 2,433,698 jobs in 2007. The same is true for all of the individual counties, except for Glades, which is relatively small and has a substantial share of its economy and employment in agriculture. The biggest declines in employment since 2007 have occurred in Pinellas and Manatee counties where job levels in 2013 were 8.13 and 9.15 percent below their 2007 peak, respectively (Figure 5).
Port Cargo Shipping

Marine shipping and associated activities are the most important marine-related industry group in the expanded WCIND region, representing over three-quarters of the total marine economy for the region and more than 70
percent of this activity in each of the individual counties, except Manatee. Geographically, Marine Transportation in the region is dominated by the port facilities around Tamp Bay, including Pinellas, Hillsborough and Manatee Counties. Volumes and values for marine cargo ports in southwest Florida between 1997 and 2012 are shown in Figures 6 and 7. Cargo volume and value peaked for the region in 2008, at 17.1 million tons and $7.95 billion. In 2012, 13.9 million tons and $5.26 billion in cargo were shipped through WCIND ports.

The latest 2014 volume and value data for Southwest Florida ports are given in Table 3 and are broken out by imports and exports, and, for container shipments versus cargo. The Port of Tampa dominates the volume and value shipped to and from the region; however, the Ports of Manatee and St. Petersburg had a greater share of their total volume and value from container shipments. The total volume and value of marine shipments for all ports in 2014 were 14.53 million tons and $5.21 billion respectively.

**Figure 6.** Shipping cargo volume for southwest Florida ports, 1997–2012
**Figure 7.** Shipping cargo value for southwest Florida ports, 1997–2012

Source: National Ocean Economics Program, derived from import-export reports by the Foreign Trade Division of the US Census Bureau.

**Table 3. Summary of marine cargo volume and value for southwest Florida ports, 2014**

<table>
<thead>
<tr>
<th>Port</th>
<th>Import/Export</th>
<th>Shipping Weight (tons)</th>
<th>Shipping Value (dollars)</th>
<th>Container Weight (tons)</th>
<th>Container Value (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boca Grande</strong> (imports)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>37,994</td>
<td>5</td>
<td>34,362</td>
<td></td>
</tr>
<tr>
<td><strong>Port Manatee</strong></td>
<td></td>
<td>1,765,062</td>
<td>695,460,668</td>
<td>360,561</td>
<td>174,246,131</td>
</tr>
<tr>
<td>Exports</td>
<td>158,787</td>
<td>102,338,477</td>
<td>3,635</td>
<td>6,145,031</td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td>1,606,275</td>
<td>593,122,191</td>
<td>356,926</td>
<td>168,101,100</td>
<td></td>
</tr>
<tr>
<td><strong>St. Petersburg</strong></td>
<td></td>
<td>164</td>
<td>477,057</td>
<td>144</td>
<td>422,742</td>
</tr>
<tr>
<td>Exports</td>
<td>13</td>
<td>122,099</td>
<td>13</td>
<td>122,099</td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td>151</td>
<td>354,958</td>
<td>131</td>
<td>300,643</td>
<td></td>
</tr>
<tr>
<td><strong>Tampa</strong></td>
<td></td>
<td>12,766,568</td>
<td>4,509,227,930</td>
<td>449,440</td>
<td>613,582,543</td>
</tr>
<tr>
<td>Exports</td>
<td>6,004,282</td>
<td>2,389,894,450</td>
<td>95,050</td>
<td>76,980,802</td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td>6,762,286</td>
<td>2,119,333,480</td>
<td>354,390</td>
<td>536,601,741</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14,531,800</td>
<td>$5,205,203,649</td>
<td>810,150</td>
<td>$788,285,778</td>
<td></td>
</tr>
</tbody>
</table>
Commercial Fisheries Landings

The volume and value of commercial fishery landings in southwest Florida are charted in Figures 8 and 9 for the years 2000 through 2013. Both volume and value declined substantially in 2007 and had not completely recovered by 2013. Fishing ports in Tampa-St. Petersburg (Hillsborough and Pinellas Counties) and Fort Myers (Lee County) earned the majority of economic activity for fisheries in southwest Florida. The ports in Naples (Collier County) and Cortez (Manatee County) have seen increased activity since 2008. In general, commercial fisheries in Florida and worldwide are facing reduced harvests due to declining wild fish stocks and competition from commercial aquaculture.

Figure 8. Commercial fishery landing volumes at southwest Florida ports, 2000–13
Recreational Fishing

Detailed data was obtained on recreational fishing trips and expenditures in southwest Florida Counties for 2012 and 2014 in order to evaluate the importance of this activity for the expanded WCIND region. Recreational fishing trips altogether accounted for about 55 percent of all fishing trips in the southwestern Florida coastal area of the Gulf of Mexico during 2014, with Pinellas, Manatee, and Hillsborough counties capturing the largest shares of these (Table 4). Total recreational fishing trip expenditures for the southwest Florida region in 2012 were estimated at $371 million, and related durable equipment spending was estimated at $3.02 billion.

Non-resident anglers were responsible for $195 million, or 52 percent, of fishing trip expenditures in 2012, with the remaining $176 million made by local residents (Table 5). Pinellas, Manatee and Hillsborough counties had the largest shares of these non-resident trip expenditures, with Pinellas capturing more than one-third of this economic activity in 2012. The largest resident trip-expenditure items were for boat rentals (15.1%), auto fuel (10.8%), bait (6.4%) and groceries (6.0%). The largest non-resident trip-expenditures were for charter fees (11.9%), auto fuel (11.4%), lodging (7.7%), and restaurants (5.8%). Fishing trip expenditures for retail store purchases were margined to accurately account for the local value of these sales. Pinellas, Manatee and Hillsborough counties captured the largest shares of durable equipment expenditures (Table 6). Only non-resident recreational fishing expenditures were used in the analysis of economic contributions, since spending by local residents represents a transfer rather than new final demand.

Table 4. Recreational angler share of total region trips (2014), and estimated trip & durable equipment expenditures (2012) in southwest Florida counties

<table>
<thead>
<tr>
<th>County</th>
<th>Shore trips</th>
<th>For hire trips</th>
<th>Private boat trips</th>
<th>All trips</th>
<th>Estimated Trip Spending ($1000)</th>
<th>Estimated Durable Goods Spending ($1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cortez</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Everglades City</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naples</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Myers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tampa-St. Pete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 9. Commercial fishery landing values at southwest Florida ports, 2000–13
<table>
<thead>
<tr>
<th>County</th>
<th>Value1</th>
<th>Value2</th>
<th>Value3</th>
<th>Value4</th>
<th>Value5</th>
<th>Value6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>2.6%</td>
<td>0.0%</td>
<td>3.9%</td>
<td>3.2%</td>
<td>16,587</td>
<td>174,847</td>
</tr>
<tr>
<td>Collier</td>
<td>6.0%</td>
<td>12.0%</td>
<td>3.7%</td>
<td>5.1%</td>
<td>51,891</td>
<td>278,538</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>3.5%</td>
<td>1.5%</td>
<td>12.0%</td>
<td>8.0%</td>
<td>46,912</td>
<td>437,106</td>
</tr>
<tr>
<td>Lee</td>
<td>3.7%</td>
<td>5.2%</td>
<td>7.1%</td>
<td>5.6%</td>
<td>41,318</td>
<td>307,041</td>
</tr>
<tr>
<td>Manatee</td>
<td>16.1%</td>
<td>3.1%</td>
<td>2.9%</td>
<td>8.4%</td>
<td>44,264</td>
<td>463,754</td>
</tr>
<tr>
<td>Pinellas</td>
<td>23.2%</td>
<td>17.3%</td>
<td>15.8%</td>
<td>19.0%</td>
<td>132,222</td>
<td>1,044,905</td>
</tr>
<tr>
<td>Sarasota</td>
<td>4.7%</td>
<td>4.0%</td>
<td>6.5%</td>
<td>5.6%</td>
<td>38,231</td>
<td>309,149</td>
</tr>
<tr>
<td>Total</td>
<td>60.0%</td>
<td>43.1%</td>
<td>51.8%</td>
<td>54.9%</td>
<td>371,425</td>
<td>3,015,340</td>
</tr>
</tbody>
</table>

Source: NOAA, National Marine Fisheries Services
### Table 5. Recreational fishing trip expenditures and output distribution by type and county, 2012

<table>
<thead>
<tr>
<th>Expenditure category</th>
<th>Percent of Total (from 2011 data for W. Fla.-Gulf of Mexico)</th>
<th>Total Expenditures for Southwest Florida 2012 ($1000)</th>
<th>Margin</th>
<th>Total non-resident output (margined) by county 2012 ($1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident Non-Resident</td>
<td>Resident Non-Resident All Anglers</td>
<td></td>
<td>Charlotte Collier Hillsborough Lee Manatee Pinellas Sarasota Total</td>
</tr>
<tr>
<td>Auto fuel</td>
<td>10.8% 11.4%</td>
<td>40,271 42,458 82,729</td>
<td>10.8%</td>
<td>266 424 665 467 705 1,589 470 4,585</td>
</tr>
<tr>
<td>Auto rental</td>
<td>0.0% 1.6%</td>
<td>0 6,054 6,054</td>
<td>100.0%</td>
<td>351 559 878 616 931 2,098 621 6,054</td>
</tr>
<tr>
<td>Bait</td>
<td>6.4% 1.8%</td>
<td>23,784 6,860 30,645</td>
<td>41.6%</td>
<td>165 264 414 291 439 989 293 2,854</td>
</tr>
<tr>
<td>Boat rental</td>
<td>15.1% 2.1%</td>
<td>56,057 7,963 64,019</td>
<td>100.0%</td>
<td>462 736 1,154 811 1,225 2,759 816 7,963</td>
</tr>
<tr>
<td>Charter fees</td>
<td>3.5% 11.9%</td>
<td>12,973 44,087 57,060</td>
<td>100.0%</td>
<td>2,556 4,072 6,391 4,489 6,780 15,277 4,520 44,087</td>
</tr>
<tr>
<td>Crew tips</td>
<td>0.3% 1.4%</td>
<td>1,042 5,205 6,247</td>
<td>100.0%</td>
<td>302 481 755 530 801 1,804 534 5,205</td>
</tr>
<tr>
<td>Fish processing</td>
<td>0.0% 0.0%</td>
<td>0 30 30</td>
<td>100.0%</td>
<td>2 3 4 3 5 10 3 30</td>
</tr>
<tr>
<td>Grocery stores</td>
<td>6.0% 3.4%</td>
<td>22,444 12,621 35,065</td>
<td>27.9%</td>
<td>204 325 510 359 542 1,220 361 3,521</td>
</tr>
<tr>
<td>Restaurants</td>
<td>1.9% 5.8%</td>
<td>7,014 21,614 28,629</td>
<td>100.0%</td>
<td>1,253 1,997 3,133 2,201 3,324 7,490 2,216 21,614</td>
</tr>
<tr>
<td>Gifts &amp; Souvenirs</td>
<td>0.0% 1.2%</td>
<td>46 4,471 4,517</td>
<td>45.4%</td>
<td>118 187 294 207 312 703 208 2,030</td>
</tr>
<tr>
<td>Ice</td>
<td>1.0% 0.2%</td>
<td>3,744 725 4,468</td>
<td>27.9%</td>
<td>12 19 29 21 31 70 21 202</td>
</tr>
<tr>
<td>Lodging</td>
<td>0.2% 7.7%</td>
<td>702 28,470 29,173</td>
<td>27.9%</td>
<td>461 734 1,151 809 1,222 2,753 814 7,943</td>
</tr>
<tr>
<td>Parking/access fees</td>
<td>2.2% 0.6%</td>
<td>8,340 2,376 10,717</td>
<td>100.0%</td>
<td>138 219 344 242 365 823 244 2,376</td>
</tr>
<tr>
<td>Public transportation</td>
<td>0.0% 3.2%</td>
<td>29 11,927 11,955</td>
<td>100.0%</td>
<td>692 1,102 1,729 1,214 1,834 4,133 1,223 11,927</td>
</tr>
<tr>
<td>Tournament fees</td>
<td>0.0% 0.0%</td>
<td>0 0 0</td>
<td>100.0%</td>
<td>0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47.5% 52.5%</strong></td>
<td><strong>176,447 194,860 371,308</strong></td>
<td><strong>6,981 11,121 17,452 12,259 18,516 41,719 12,343 120,391</strong></td>
<td></td>
</tr>
<tr>
<td>Expenditure category</td>
<td>Percent of Total (from 2011 data for W. Fla)</td>
<td>Total Expenditures for Southwest Florida 2012 ($1000)</td>
<td>Margin</td>
<td>Total non-resident output (margined) by county 2012 ($1000)</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>--------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Resident</td>
<td>Non-Resident</td>
<td>Resident</td>
<td>Non-Resident</td>
</tr>
<tr>
<td>Tackle</td>
<td>4.7%</td>
<td>1.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rods &amp; reels</td>
<td>6.1%</td>
<td>1.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binoculars</td>
<td>0.3%</td>
<td>0.0%</td>
<td>7,661</td>
<td>903</td>
</tr>
<tr>
<td>Camping equip.</td>
<td>1.1%</td>
<td>0.0%</td>
<td>32,988</td>
<td>621</td>
</tr>
<tr>
<td>Clothing</td>
<td>1.4%</td>
<td>0.4%</td>
<td>41,725</td>
<td>13,165</td>
</tr>
<tr>
<td>Club dues</td>
<td>0.2%</td>
<td>0.0%</td>
<td>4,869</td>
<td>339</td>
</tr>
<tr>
<td>License fees</td>
<td>0.9%</td>
<td>1.0%</td>
<td>28,236</td>
<td>31,399</td>
</tr>
<tr>
<td>Magazine subscriptions</td>
<td>0.4%</td>
<td>0.1%</td>
<td>12,880</td>
<td>1,549</td>
</tr>
<tr>
<td>Taxidermy</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>New boats</td>
<td>27.3%</td>
<td>1.9%</td>
<td>823,069</td>
<td>57,490</td>
</tr>
<tr>
<td>Used boats</td>
<td>1.1%</td>
<td>1.7%</td>
<td>34,664</td>
<td>52,248</td>
</tr>
<tr>
<td>New canoes</td>
<td>0.1%</td>
<td>0.0%</td>
<td>3,168</td>
<td>0</td>
</tr>
<tr>
<td>New accessories</td>
<td>5.0%</td>
<td>0.3%</td>
<td>152,195</td>
<td>10,044</td>
</tr>
<tr>
<td>Used accessories</td>
<td>0.0%</td>
<td>0.0%</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>Boat insurance</td>
<td>3.9%</td>
<td>0.2%</td>
<td>119,007</td>
<td>6,426</td>
</tr>
<tr>
<td>Boat maintenance</td>
<td>11.7%</td>
<td>0.2%</td>
<td>351,935</td>
<td>6,301</td>
</tr>
<tr>
<td>Boat registration</td>
<td>1.5%</td>
<td>0.0%</td>
<td>46,319</td>
<td>1,168</td>
</tr>
<tr>
<td>Boat storage</td>
<td>2.9%</td>
<td>0.2%</td>
<td>88,086</td>
<td>5,283</td>
</tr>
<tr>
<td>Boat purchase fees</td>
<td>0.9%</td>
<td>0.6%</td>
<td>28,262</td>
<td>17,264</td>
</tr>
<tr>
<td>New vehicles</td>
<td>5.9%</td>
<td>0.0%</td>
<td>176,555</td>
<td>0</td>
</tr>
<tr>
<td>Used vehicles</td>
<td>0.7%</td>
<td>0.0%</td>
<td>21,008</td>
<td>0</td>
</tr>
<tr>
<td>Vehicle insurance</td>
<td>1.4%</td>
<td>0.1%</td>
<td>41,359</td>
<td>1,747</td>
</tr>
<tr>
<td>Vehicle maintenance</td>
<td>0.8%</td>
<td>0.0%</td>
<td>22,985</td>
<td>1,027</td>
</tr>
<tr>
<td>Vehicle registration</td>
<td>0.2%</td>
<td>0.0%</td>
<td>6,086</td>
<td>877</td>
</tr>
<tr>
<td>Vehicle fees</td>
<td>0.4%</td>
<td>0.0%</td>
<td>11,438</td>
<td>0</td>
</tr>
<tr>
<td>New homes</td>
<td>9.4%</td>
<td>0.0%</td>
<td>284,099</td>
<td>0</td>
</tr>
<tr>
<td>Bus insurance</td>
<td>0.0%</td>
<td>0.4%</td>
<td>0</td>
<td>10,707</td>
</tr>
<tr>
<td>2nd home maint.</td>
<td>0.0%</td>
<td>0.4%</td>
<td>0</td>
<td>11,369</td>
</tr>
<tr>
<td>2nd home taxes</td>
<td>0.2%</td>
<td>0.1%</td>
<td>6,036</td>
<td>3,809</td>
</tr>
<tr>
<td>2nd home fees</td>
<td>0.6%</td>
<td>0.4%</td>
<td>17,190</td>
<td>11,021</td>
</tr>
<tr>
<td>Total</td>
<td>89.2%</td>
<td>10.8%</td>
<td>2,688,679</td>
<td>326,657</td>
</tr>
</tbody>
</table>

Table 6. Recreational fishing durable equipment expenditures and output distribution by type and county, 2012
Marine-Related Establishments

The number of marine-related establishments by county and NAICS industry types are shown in Tables 7 and 8 for the expanded nine-county WCIND region. Pinellas, Lee and Hillsborough counties are home to almost two-thirds of the marine related businesses in the region with 260, 167, and 138 establishments respectively. Collier, Manatee, Sarasota, have 89, 79 and 66 respectively. Only a handful of establishments are based in Hendry and Glades counties. Boat dealers are the most numerous type of marine related business in the expanded WCIND region with 214 establishments (Table 8). Marinas are the second most frequent (170), followed by Water-based scenic and sightseeing transportation (118). These three types of businesses constitute over 58 percent of the total number of marine establishments in the expanded navigation district.

Table 7. Establishments for marine-related industry jobs in southwest Florida by County

<table>
<thead>
<tr>
<th>County</th>
<th>Establishments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>54</td>
</tr>
<tr>
<td>Collier</td>
<td>89</td>
</tr>
<tr>
<td>Glades</td>
<td>1</td>
</tr>
<tr>
<td>Hendry</td>
<td>7</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>138</td>
</tr>
<tr>
<td>Lee</td>
<td>167</td>
</tr>
<tr>
<td>Manatee</td>
<td>79</td>
</tr>
<tr>
<td>Pinellas</td>
<td>260</td>
</tr>
<tr>
<td>Sarasota</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>861</strong></td>
</tr>
</tbody>
</table>

Source: Quarterly Census of Employment and Wages, Bureau of Labor Statistics

Table 8. Establishments in southwest Florida by NAICS industry sector.

<table>
<thead>
<tr>
<th>Industry</th>
<th>NAICS code</th>
<th>Establishments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquaculture</td>
<td>1125</td>
<td>18</td>
</tr>
<tr>
<td>Fishing</td>
<td>1141</td>
<td>51</td>
</tr>
<tr>
<td>Seafood product preparation &amp; packaging</td>
<td>3117</td>
<td>10</td>
</tr>
<tr>
<td>Sea, coastal, &amp; great lakes transportation</td>
<td>4831</td>
<td>26</td>
</tr>
<tr>
<td>Support activities for water transportation</td>
<td>4883</td>
<td>91</td>
</tr>
<tr>
<td>Search, detection, &amp; navigation instruments</td>
<td>334511</td>
<td>13</td>
</tr>
<tr>
<td>Ship building &amp; repairing</td>
<td>336611</td>
<td>37</td>
</tr>
<tr>
<td>Boat building</td>
<td>336612</td>
<td>58</td>
</tr>
<tr>
<td>Boat dealers</td>
<td>441222</td>
<td>214</td>
</tr>
<tr>
<td>Fish &amp; seafood markets</td>
<td>445220</td>
<td>55</td>
</tr>
<tr>
<td>Scenic &amp; sightseeing transportation, water</td>
<td>487210</td>
<td>118</td>
</tr>
<tr>
<td>Marinas</td>
<td>713930</td>
<td>170</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>861</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Quarterly Census of Employment and Wages, Bureau of Labor Statistics
Regional Economic Impacts

The total regional economic contributions or impacts, including indirect and induced multiplier effects, for marine-related activities in WCIND counties were estimated using sector employment and revenue data multiplied by the appropriate sector-specific regional multipliers, as discussed in the Methods section. Economic contribution results for employment (jobs), industry output (revenues), value-added or Gross Domestic Product (GDP), labor income, other property income, and business taxes for industry groups/sectors and counties are summarized in Tables 9 through 11.

The estimated contributions or impacts of marine-related activities in the WCIND originate from a total of $5.53 billion in direct revenues and 23,252 direct jobs across the eight affiliated southwest Florida counties. The resulting economic impacts of these initial or direct activities include: $12.21 billion in total industry Output or revenues, 79,000 fulltime and part-time Jobs, $6.10 billion in Value-added (GDP), $3.92 billion in Labor income, $1.77 billion in Other Property Type Income, and $407 million in Business Taxes on Production and Imports (Tables 9 - 11). These total contributions represent implied multiplier effects 3.20 for employment and 2.21 for output. In other words, for every one direct marine-related job in the region, 3.2 jobs are ultimately generated. This employment impact is equivalent to 14.29 jobs for every million dollars in direct marine-related spending or revenues in the region. For every initial dollar of marine-related spending in the region, $2.21 dollars of revenues are ultimately generated through that initial dollar and subsequent re-spending.

Looking across industry groups and sectors in Table 9, these impacts were dominated by activities in the Marine Transportation Group, which generated from 68 to nearly 81 percent of the total contributions, depending on type. The largest contributing sectors (which are in this group) were: Support Activities for Water Transportation with $3.79 billion (31.0%) of total output impacts, and 29,099 jobs (36.8%) total employment; Search, Detection, and Navigation Instruments ($3.00 billion (24.6%) total output impacts and 16,107 (20.4%) jobs, and; Sea, Coastal and Great Lakes Transportation ($2.60 billion (21.3%) in output impacts, and 11,968 (15.5%) jobs.

Across Counties in the region, Pinellas was the largest contributor to total regional impacts, responsible for more than 42 percent of the total for all types (Table 10). This included just over 45 percent of total Output and Employment contributions ($5.51 billion and 35,806 jobs), and, over 44 percent of Value-added and Labor income contributions ($2.71 billion and $1.73 billion respectively). Hillsborough County was responsible for between 23 and 32 percent of the total marine contributions to the region, across all types. Notably, it generated $3.76 billion or 30.8 percent of Output impacts, $1.83 billion or 29.9 percent of Value-added impacts, and 21,086 Jobs, or 26.7 percent of total Employment impacts, within the eight county region. The third most significant county for marine related impacts in the region was Lee. It garnered 10.4 percent, or $1.27 billion of total Output impacts, 11.4 percent or 9,014 Jobs in employment impacts, and 11.9 percent or $725 million in Value-added impacts. Sarasota County generated the fourth largest impacts for the region with $814 million in total Output impacts or 6.7 percent of the region’s total, 6,168 jobs or 7.8 percent of the region’s total Employment impacts, and $416 million (6.8%) of the Value-added impacts. Nearly 4.5 percent or $545 million of the region’s Output
impacts were generated by marine activities in Manatee County, as well as 4,078 jobs (4.5%), and $273 million (4.5%) in Value added. Contributions by Hendry County included $28.3 million in Output, 267 jobs, and $12.3 million in Value added impacts. Glades County contributed $100,000 in Output impacts, one Job, and $60,000 in Value-added.

Economic impacts of marine related activities are detailed by industry groups within counties in Table 11. Marine Transportation captured at least 60 percent of total marine contributions in all of the counties, except for Manatee. In Manatee County, Ship and Boat Building and Repair had the largest share of contributions, generating $257 million (47.1%) and 1,595 (39.1%) of total Output and Employment marine-related contributions respectively. Ship and boat building also represented more than ten percent of total marine contributions in Lee, Charlotte and Hillsborough Counties. Across the region, recreational fishing generated just over $595 million in output, 6,059 jobs, and $368 million Value added impacts. Pinellas County generated the largest share of regional impacts from recreational fishing at $243 million (41%) in output and 2,558 (42%) jobs. Recreational fishing represented a significant share of marine-related contributions in Manatee (17.5% output and 23.7% jobs), Lee (11.7% output and 13.8% jobs), and Sarasota (8.2% output and 10.7% jobs) counties.

Table 9. Summary of marine industry economic contributions in southwest Florida*, by industry groups and sectors, 2013

<table>
<thead>
<tr>
<th>Marine Industry Group / Sector</th>
<th>Marine Sector Direct Employment (Jobs)</th>
<th>Marine Sector Direct Industry Output (M$)</th>
<th>Industry Output Impacts (M$)</th>
<th>Employment Impacts (Jobs)</th>
<th>Value Added Impacts (M$)</th>
<th>Labor Income Impacts (M$)</th>
<th>Other Property Income Impacts (M$)</th>
<th>Business Tax Impacts (M$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Living Resources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fishing</td>
<td>892</td>
<td>48.12</td>
<td>102.63</td>
<td>1,344</td>
<td>58.83</td>
<td>37.32</td>
<td>12.22</td>
<td>9.29</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>103</td>
<td>5.52</td>
<td>12.10</td>
<td>155</td>
<td>8.81</td>
<td>4.23</td>
<td>4.18</td>
<td>0.39</td>
</tr>
<tr>
<td>Seafood product preparation &amp;</td>
<td>849</td>
<td>274.14</td>
<td>504.22</td>
<td>2,576</td>
<td>194.93</td>
<td>125.39</td>
<td>58.19</td>
<td>11.35</td>
</tr>
<tr>
<td>packaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish &amp; seafood markets</td>
<td>238</td>
<td>15.55</td>
<td>37.77</td>
<td>419</td>
<td>23.50</td>
<td>14.83</td>
<td>6.01</td>
<td>2.66</td>
</tr>
<tr>
<td><strong>Ship &amp; Boat Bld. &amp; Repair</strong></td>
<td>3,256</td>
<td>629.58</td>
<td>1,341.63</td>
<td>8,781</td>
<td>674.96</td>
<td>432.93</td>
<td>168.50</td>
<td>73.52</td>
</tr>
<tr>
<td>Ship building &amp; repair</td>
<td>610</td>
<td>139.68</td>
<td>288.54</td>
<td>1,749</td>
<td>134.42</td>
<td>95.84</td>
<td>29.42</td>
<td>9.15</td>
</tr>
<tr>
<td>Boat building &amp; repair</td>
<td>1,261</td>
<td>311.44</td>
<td>621.84</td>
<td>3,526</td>
<td>253.30</td>
<td>166.57</td>
<td>65.21</td>
<td>21.52</td>
</tr>
<tr>
<td>Boat dealers</td>
<td>1,386</td>
<td>178.45</td>
<td>431.26</td>
<td>3,505</td>
<td>287.24</td>
<td>170.52</td>
<td>73.87</td>
<td>42.85</td>
</tr>
<tr>
<td><strong>Marine Transportation</strong></td>
<td>17,914</td>
<td>4,302.88</td>
<td>9,614.91</td>
<td>59,666</td>
<td>4,774.48</td>
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<tr>
<td>Sea, coastal &amp; Great Lakes</td>
<td>1,611</td>
<td>1,229.13</td>
<td>2,603.15</td>
<td>11,968</td>
<td>1,139.03</td>
<td>652.78</td>
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<td>66.17</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support activities for water</td>
<td>11,327</td>
<td>1,639.23</td>
<td>3,788.92</td>
<td>29,099</td>
<td>2,097.30</td>
<td>1,423.24</td>
<td>556.11</td>
<td>117.94</td>
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<td></td>
</tr>
<tr>
<td>Marinas</td>
<td>1,357</td>
<td>84.19</td>
<td>191.03</td>
<td>2,238</td>
<td>112.80</td>
<td>73.57</td>
<td>31.84</td>
<td>7.39</td>
</tr>
<tr>
<td>Scenic &amp; sightseeing</td>
<td>136</td>
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<td>26.40</td>
<td>254</td>
<td>11.32</td>
<td>6.12</td>
<td>4.53</td>
<td>0.67</td>
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<td>Search, detection &amp;</td>
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<td>1,335.47</td>
<td>3,005.40</td>
<td>16,107</td>
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</tr>
<tr>
<td><strong>Recreational Fishing</strong></td>
<td>250.98</td>
<td>595.34</td>
<td>6,059</td>
<td>368.00</td>
<td>239.80</td>
<td>95.91</td>
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<tr>
<td><strong>Grand Total</strong></td>
<td>23,252</td>
<td>5,526.77</td>
<td>12,208.60</td>
<td>79,000</td>
<td>6,103.50</td>
<td>3,922.91</td>
<td>1,773.22</td>
<td>407.37</td>
</tr>
</tbody>
</table>

*Does not include Collier County.
Table 10. Summary of marine industry economic contributions for southwest Florida counties, 2013

<table>
<thead>
<tr>
<th>Marine Industry Group / Sector</th>
<th>Marine Sector Direct Employment (Jobs)</th>
<th>Marine Sector Direct Industry Output (M$)</th>
<th>Industry Output Impacts (M$)</th>
<th>Employment Impacts (Jobs)</th>
<th>Value Added Impacts (M$)</th>
<th>Labor Income Impacts (M$)</th>
<th>Other Property Income Impacts (M$)</th>
<th>Business Tax Impacts (M$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>1,136</td>
<td>142.26</td>
<td>271.71</td>
<td>2,579</td>
<td>135.95</td>
<td>77.41</td>
<td>45.27</td>
<td>13.27</td>
</tr>
<tr>
<td>Glades</td>
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<td>0.07</td>
<td>0.10</td>
<td>1</td>
<td>0.06</td>
<td>0.04</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Hendry</td>
<td>142</td>
<td>16.02</td>
<td>28.29</td>
<td>267</td>
<td>12.34</td>
<td>6.61</td>
<td>5.00</td>
<td>0.73</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>5,497</td>
<td>1,750.94</td>
<td>3,763.31</td>
<td>21,086</td>
<td>1,826.19</td>
<td>1,181.64</td>
<td>542.47</td>
<td>102.08</td>
</tr>
<tr>
<td>Lee</td>
<td>3,123</td>
<td>600.29</td>
<td>1,272.70</td>
<td>9,014</td>
<td>725.40</td>
<td>485.99</td>
<td>188.28</td>
<td>51.14</td>
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<tr>
<td>Manatee</td>
<td>1,285</td>
<td>268.80</td>
<td>545.09</td>
<td>4,078</td>
<td>272.72</td>
<td>174.34</td>
<td>73.33</td>
<td>25.06</td>
</tr>
<tr>
<td>Pinellas</td>
<td>9,910</td>
<td>2,380.25</td>
<td>5,513.58</td>
<td>35,806</td>
<td>2,714.86</td>
<td>1,733.86</td>
<td>796.27</td>
<td>184.72</td>
</tr>
<tr>
<td>Sarasota</td>
<td>2,158</td>
<td>368.15</td>
<td>813.83</td>
<td>6,168</td>
<td>415.98</td>
<td>263.02</td>
<td>122.59</td>
<td>30.37</td>
</tr>
<tr>
<td>Total</td>
<td>23,252</td>
<td>5,526.77</td>
<td>12,208.60</td>
<td>79,000</td>
<td>6,103.50</td>
<td>3,922.91</td>
<td>1,773.22</td>
<td>407.37</td>
</tr>
</tbody>
</table>

Table 11. Economic contributions of marine industries in southwest Florida counties, by industry group, 2013

<table>
<thead>
<tr>
<th>County / Marine Industry Group</th>
<th>Marine Sector Direct Employment (Jobs)</th>
<th>Marine Sector Direct Industry Output (M$)</th>
<th>Industry Output Impacts (M$)</th>
<th>Employment Impacts (Jobs)</th>
<th>Value Added Impacts (M$)</th>
<th>Labor Income Impacts (M$)</th>
<th>Other Property Income Impacts (M$)</th>
<th>Business Tax Impacts (M$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living Resources</td>
<td>1,136</td>
<td>142.26</td>
<td>271.71</td>
<td>2,579</td>
<td>135.95</td>
<td>77.41</td>
<td>45.27</td>
<td>13.27</td>
</tr>
<tr>
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<td>275</td>
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<td>11.51</td>
<td>5.65</td>
<td>3.56</td>
</tr>
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<td>87.90</td>
<td>49.86</td>
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</tr>
<tr>
<td></td>
<td>16.03</td>
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<td>19.19</td>
<td>11.99</td>
<td>5.32</td>
<td>1.88</td>
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<tr>
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<td>0.10</td>
<td>1</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
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<td>0.07</td>
<td>0.10</td>
<td>1</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Hendry</td>
<td>142</td>
<td>16.02</td>
<td>28.29</td>
<td>267</td>
<td>12.34</td>
<td>6.61</td>
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<td>0.02</td>
</tr>
<tr>
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<td>0.91</td>
<td>5</td>
<td>0.33</td>
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<td>0.09</td>
<td>0.03</td>
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<td>6.16</td>
<td>4.56</td>
<td>0.68</td>
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<tr>
<td>Recreational Fishing</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>5,497</td>
<td>1,750.94</td>
<td>3,763.31</td>
<td>21,086</td>
<td>1,826.19</td>
<td>1,181.64</td>
<td>542.47</td>
<td>102.08</td>
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<td>10.53</td>
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<td>41.93</td>
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<tr>
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<td>600.29</td>
<td>1,272.70</td>
<td>9,014</td>
<td>728.40</td>
<td>485.99</td>
<td>188.28</td>
<td>51.14</td>
</tr>
<tr>
<td>Living Resources</td>
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<td>29.63</td>
<td>273</td>
<td>17.66</td>
<td>12.04</td>
<td>3.73</td>
<td>1.88</td>
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<td>32.90</td>
</tr>
<tr>
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<td>62.35</td>
<td>630</td>
<td>39.37</td>
<td>25.59</td>
<td>10.15</td>
<td>3.64</td>
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<tr>
<td>Manatee</td>
<td>1,285</td>
<td>268.80</td>
<td>545.09</td>
<td>4,078</td>
<td>272.72</td>
<td>174.34</td>
<td>73.33</td>
<td>25.06</td>
</tr>
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<td>6.38</td>
<td>2.91</td>
<td>2.63</td>
</tr>
<tr>
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<td>630</td>
<td>134.72</td>
<td>256.61</td>
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<td>70.73</td>
<td>29.50</td>
<td>11.90</td>
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<td>58.62</td>
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<td>5.17</td>
</tr>
<tr>
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<td>42.53</td>
<td>95.33</td>
<td>965</td>
<td>59.20</td>
<td>38.60</td>
<td>15.24</td>
<td>5.36</td>
<td></td>
</tr>
<tr>
<td>Pinellas</td>
<td>9,910</td>
<td>2,380.25</td>
<td>5,513.58</td>
<td>35,806</td>
<td>2,714.86</td>
<td>1,733.86</td>
<td>796.27</td>
<td>184.72</td>
</tr>
<tr>
<td>Living Resources</td>
<td>529</td>
<td>69.26</td>
<td>140.18</td>
<td>1,098</td>
<td>63.69</td>
<td>39.88</td>
<td>17.35</td>
<td>6.45</td>
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<td>1,453.69</td>
<td>677.35</td>
<td>138.45</td>
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<td>95.19</td>
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<tr>
<td>Sarasota</td>
<td>2,158</td>
<td>368.15</td>
<td>813.83</td>
<td>6,168</td>
<td>415.98</td>
<td>263.02</td>
<td>122.59</td>
<td>30.37</td>
</tr>
<tr>
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<td>0.28</td>
<td>0.18</td>
</tr>
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<td>26.24</td>
<td>10.94</td>
<td>5.67</td>
</tr>
<tr>
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<td>669.59</td>
<td>4,932</td>
<td>331.46</td>
<td>209.64</td>
<td>100.93</td>
<td>20.88</td>
</tr>
<tr>
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<td>40.56</td>
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<tr>
<td>Total</td>
<td>23,252</td>
<td>5,526.8</td>
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<td>6,103.5</td>
<td>3,922.9</td>
<td>1,773.2</td>
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</tbody>
</table>
The relative share of marine-related GDP and employment in relation to total economic activity in WCIND counties for 2013 is shown in Table 12. Pinellas County had the greatest share of marine-related GDP and employment contributions relative to its total economy at 6.61 and 6.49 percent respectively. Manatee county had the second largest share of marine-related activities, but its total economy is only a quarter as large as Pinellas, such that in absolute terms its marine-related activity ranks behind Hillsborough, Sarasota and Lee. Charlotte County had the third largest marine-related industry in percentage terms, but that was considerably smaller than in Manatee County.

Table 12. Marine industry share of total Gross Domestic Product (GDP) and employment in southwest Florida counties, 2013

<table>
<thead>
<tr>
<th>County</th>
<th>County GDP (M$)</th>
<th>Total County Employment (Jobs)</th>
<th>Marine Industry Share of County GDP</th>
<th>Marine Industry Share of County Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>4,253.11</td>
<td>68,520</td>
<td>3.21%</td>
<td>3.78%</td>
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<tr>
<td>Glades</td>
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<td>3,958</td>
<td>0.02%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Hendry</td>
<td>1,262.66</td>
<td>18,575</td>
<td>0.98%</td>
<td>1.44%</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>70,665.68</td>
<td>806,343</td>
<td>2.59%</td>
<td>2.62%</td>
</tr>
<tr>
<td>Lee</td>
<td>22,419.45</td>
<td>312,148</td>
<td>3.24%</td>
<td>2.90%</td>
</tr>
<tr>
<td>Manatee</td>
<td>11,397.58</td>
<td>164,922</td>
<td>3.62%</td>
<td>3.84%</td>
</tr>
<tr>
<td>Pinellas</td>
<td>41,136.05</td>
<td>553,214</td>
<td>6.61%</td>
<td>6.49%</td>
</tr>
<tr>
<td>Sarasota</td>
<td>16,201.15</td>
<td>231,209</td>
<td>2.58%</td>
<td>2.68%</td>
</tr>
<tr>
<td>Region Total</td>
<td>181,695.98</td>
<td>2,350,889</td>
<td>3.79%</td>
<td>3.83%</td>
</tr>
</tbody>
</table>

Source: IMPLAN Group, LLC (2015)

Conclusions

Southwest Florida has experienced rapid growth and development over the last 50 years and this will likely continue into the future. Marine-related activities in the West Coast Inland Navigation District are, and will continue to be, important to southwest Florida’s overall economy, having generated nearly 80,000 jobs, $12.2 billion in revenues, and $6.1 billion in Value-added or GDP for the region in 2013. Marine Transportation, and, Ship and Boat Building and Repair, are the most important marine industry sectors regionally, while Living Resources and Recreational Fishing are also important for some individual counties in the region. Maintaining and improving the value and function of the region’s marine infrastructure and ecology will be necessary and beneficial to its continued ability to attract and facilitate future business and tourism, and, maintain a desirable quality of life for all residents and visitors to the region.
References


West Coast Inland Navigation District, 200 E. Miami Ave., Venice, FL 34285, http://wcind.net/about/.
Appendix A: Glossary of Regional Economic Terminology

**Contribution** (economic) represents the gross change in economic activity associated with an industry, event, or policy in an existing regional economy.

**Employee compensation** is comprised of wages, salaries, commissions, and benefits such as health and life insurance, retirement and other forms of cash or non-cash compensation.

**Employment** is a measure of the number of jobs involved, including full-time, part-time and seasonal positions. It is not a measure of full-time equivalents (FTE).

**Exports** are sales of goods to customers outside the region in which they are produced, which represents a net inflow of money to the region. This also applies to sales of goods and services to customers visiting from other regions.

**Final Demand** represents sales to final consumers, including households, governments, and exports from the region.

**Gross Regional Product** is a measure of total economic activity in a region, or total income generated by all goods and services. It equals the total value added by all industries in that region, and is equivalent to Gross Domestic Product for the nation.

**IMPLAN** is a computer-based input-output modeling system that enables users to create regional economic models and multipliers for any region consisting of one or more counties or states in the U.S. The current version of the IMPLAN software, version 3, accounts for commodity production and consumption for 536 industry sectors, 10 household income levels, taxes to local/state and federal governments, capital investment, imports and exports, transfer payments, and business inventories. Regional datasets for individual counties or states are purchased separately.

**Impact or total impact** is the net change in total regional economic activity (e.g. output or employment) resulting from a change in final demand, direct industry output, or direct employment, estimated based on regional economic multipliers.

**Imports** are purchases of goods and services originating outside the region of analysis.

**Income** is the money earned within the region from production and sales. Total income includes labor income such as wages, salaries, employee benefits and business proprietor income, plus other property income.

**Taxes on Production and Imports** are taxes paid to governments by individuals or businesses for property, excise and sales taxes, but do not include income taxes.

**Input-Output (I-O) model and Social Accounting Matrix (SAM)** is a representation of the transactions between industry sectors within a regional economy that captures what each sector purchases from every other sector in order to produce its output of goods or services. Using such a model, flows of economic activity associated with any change in spending or employment may be traced backwards through the supply chain.

**Local** refers to goods and services that are sourced from within the region, which may be defined as a county, multi-county cluster, or state. Non-local refers to economic activity originating outside the region.
Margins represent the portion of the purchaser price accruing to the retailer, wholesaler, and producer/manufacturer, in the supply chain. Typically, only the retail margins of many goods purchased by consumers accrue to the local region, as the wholesaler, shipper, and manufacturer often lie outside the local area.

Multipliers capture the total effects, both direct and secondary, in a given region, generally as a ratio of the total change in economic activity in the region relative to the direct change. Multipliers are derived from an I-O model of the regional economy. Multipliers may be expressed as ratios of sales, income, or employment, or as ratios of total income or employment changes relative to direct sales. Multipliers express the degree of interdependency between sectors in a region's economy and therefore vary considerably across regions and sectors. A sector-specific multiplier gives the total changes to the economy associated with a unit change in output or employment in a given sector (i.e. the direct or initial economic effect) being evaluated. Indirect effects multipliers represent the changes in sales, income, or employment within the region in backward-linked industries supplying goods and services to businesses (e.g., increased sales in input supply firms resulting from more nursery industry sales). Induced effects multipliers represent the increased sales within the region from household spending of the income earned in the direct and supporting industries for housing, utilities, food, etc. An imputed multiplier is calculated as the ratio of the total impact divided by direct effect for any given measure (e.g. output, employment).

Other property income represents income received from investments, such as corporate dividends, royalties, property rentals, or interest on loans.

Output is the dollar value of a good or service produced or sold, and is equivalent to sales revenues plus changes in business inventories.

Producer prices are the prices paid for goods at the factory or point of production. For manufactured goods the purchaser price equals the producer price plus a retail margin, a wholesale margin, and a transportation margin. For services, the producer and purchaser prices are equivalent.

Proprietor income is income received by non-incorporated private business owners or self-employed individuals.

Purchaser prices are the prices paid by the final consumer of a good or service.

Region or Regional Economy is the geographic area and the economic activity it contains for which impacts are estimated. It may consist of an individual county, an aggregation of several counties, a state, or aggregation of states. These aggregations are sometimes defined on the basis of worker commuting patterns.

Sector is an individual industry or group of industries that produce similar products or services, or have similar production processes. Sectors are classified according to the North American Industrial Classification System (NAICS).

Value Added is a broad measure of income, representing the sum of employee compensation, proprietor income, other property income, indirect business taxes and capital consumption (depreciation). Value added is a commonly used measure of the contribution of an industry to regional economy because it avoids double counting of intermediate sales.