The Sustainable Working Waterfronts Toolkit

Economic Analysis of Working Waterfronts in the United States



ECONOMIC ANALYSIS OF WORKING WATERFRONTS IN THE UNITED STATES

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Economic Analysis of Working Waterfronts in the United States

Executive Summary

Waterfront communities in the United States, whether rural or urban, recreational or industrialized, have been subject to economic, technological, ecological, and demographic changes that challenge their continued existence or development. The purpose of this study is to document the current status, contribution to regional economies, and future prospects of U.S. coastal communities in order help promote their long-term economic prosperity. A review of the relevant literature on economic valuation of waterfront and ocean-related economic activities found that previous studies usually evaluated only one particular economic sector or specific region. The present study attempts to provide a comprehensive evaluation of all ocean-related economic activity for all coastal regions of the United States.

A commonly accepted definition of ocean-related economic activity was adopted for this analysis based on specific industry sectors (NAICS codes) developed under the National Ocean Economics Program¹. This classification scheme includes six major industry groups: marine construction, marine living resources (fishing, aquaculture, seafood processing), offshore minerals (oil and gas production, sand and gravel mining), ship and boat building/repair, coastal tourism/recreation (boat dealers, marinas, waterfront hotels, restaurants, tours, marine parks, etc.), and marine transportation (ports, shipping, warehousing, passenger transportation) (Table 1). Data on economic activity in these sectors were compiled for the period 1990-2010, including information on employment, wages and value added or contribution to Gross Domestic Product (GDP)². In addition, data were gathered on specific high profile industries such as commercial fishing, port shipping, and passenger cruise ships.

Coastal regions of the U.S. were defined for this analysis to include counties within 50 miles of the coastline or counties located in coastal zones as established by the Coastal Zone Management Act (Figures B1-B11). The 11 coastal regions and the states included in each were: North Atlantic (ME, NH, MA, RI, CT, NY), Middle Atlantic (NJ, DE, PA, VA), South Atlantic (NC, SC, GA, FL), Eastern Gulf of Mexico (FL, GA, AL, MS), Western Gulf of Mexico (LA, TX), Eastern Great Lakes (NY, PA, OH, MI), Western Great Lakes (MI, IN, IL, WI, MN), Pacific Northwest (OR, WA), California, Alaska and Hawaii (Pacific) (Figure 1, Table 2). Ocean-related economic activity was inventoried for over 440 coastal zone counties in 30 states within these regions.

Total economic contributions of ocean-related activity were evaluated using IMPLAN® (IMpact analysis for PLANning) regional economic multipliers that capture the secondary effects of supply chain activity or input

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¹ See: www.**oceaneconomics**.org/

² The use of GDP here is defined as the measure of total value-added economic activity for <u>any</u> geographic area, i.e., county, state, region, or nation.

purchases (indirect effects) and respending of income by employees, business owners and governments (induced effects) arising from new final demand (<u>Table 3</u>). Changes in ocean related GDP over the period 1990-2009 were analyzed to determine significant trends for major industry groups within each coastal county, and to forecast associated economic activity to the year 2020.

In 2009, all coastal regions of the U.S. had over 130,000 ocean-related business establishments, with 2.398 million fulltime and part-time employees, who received \$84.25 billion in wages and benefits, and produced \$217.87 billion in Gross Domestic Product. Nationally, ocean-related wages averaged around \$33,489 per job annually. The western Gulf of Mexico region led the nation in ocean-related GDP (\$83 billion) and wages (\$20 billion) due to its off-shore minerals and tourism/recreation sectors, while the North Atlantic region had the largest ocean-related employment (439,633 jobs) and number of establishments (30,955) due primarily to tourism and recreation (Table 4, Tables A1-A2, Figures 2-19).

In terms of its relative importance to the overall economy, ocean-related sectors in all coastal regions of the U.S. represented 3.41 percent of total GDP and 4.85 percent of total employment. The states with the largest share of ocean-related activity were Alaska (18%), Texas (18%) and Louisiana (17.2%), due to the presence of large offshore oil and gas production. In a second tier of states, including Hawaii, Florida, Maine, South Carolina, and Alabama, ocean-related activities represented four to seven percent of GDP, reflecting mainly tourism and recreation as the dominant ocean industries. The states with the highest share of total employment (jobs), at more than 12 percent, in ocean-related industries in coastal counties were Hawaii, South Carolina, and Alaska, followed by Alabama, Georgia, Louisiana, Maine, Mississippi, and North Carolina with more than 8 percent. These states all had more than half of ocean-related jobs in the relatively labor-intensive tourism and recreation industries. In some individual coastal counties, especially in the western Gulf of Mexico region and Alaska, ocean-related sectors represented over 50 percent of total GDP and employment, although some of these counties were relatively small, with total GDP of less than \$1 billion (Table 5, Figures 20-39).

The total economic contributions of ocean industries in all U.S. coastal counties in 2009, including regional multiplier effects estimated with the *IMPLAN* regional economic models, were 6.75 million jobs, \$284.3 billion in wages, and \$644.8 billion in value-added or GDP. These total contributions for the ocean economy represented 2.9 to 3.4 times the direct contributions, indicating strong economic linkages in the respective regional economies. The western Gulf of Mexico, Mid-Atlantic, and California were the largest regions in the U.S. ocean economy, and the top five states for ocean-related total GDP contribution were Texas (\$155 billion), California (\$115 billion), New York (\$60 billion), Florida (\$64 billion), and Louisiana (\$36 billion). In terms of ocean-related total employment contributions, the largest state was California (1,340,131 jobs), followed by Florida (914,482 jobs), Texas (817,556 jobs), New York (643,298 jobs) and New Jersey (289,275 jobs). The largest individual counties for total GDP contributions were Harris County (Houston), Texas (\$140

billion), New York, New York (\$38 billion), and Los Angeles, California (\$37 billion). Among the top 50 counties in terms of in total GDP contribution, the middle Atlantic region had 12 counties, while the western Gulf of Mexico and California Pacific coast each had nine counties (Tables 6-8, Table A3).

Approximately one-fourth of the county-level ocean-related industry sectors analyzed had statistically significant trends in GDP, either positive (increasing) or negative (decreasing), over the period 1990-2009, with 70 percent of these changes being of 50 percent or greater in magnitude. The states with the largest number of positive net changes in GDP across all ocean-related sectors were Massachusetts, Maryland, Florida (Gulf coast), Texas, California, and Washington, while states with the largest negative net changes were Pennsylvania, Florida (Atlantic coast), Alaska, and Michigan. The sector with the most positive changes in GDP was tourism/recreation, with 155 counties experiencing a significant increase, and 41 counties with a decrease. The Living Resources sector had the most negative changes: 60 counties decreased and 12 counties increased. Most of the 50 county-level economic sectors with the largest decreases in economic activity over the past 20 years are predicted to disappear by the year 2020 (Tables 9-13, Table A4).

Marine cargo shipping remains one of the largest water-dependent activities in the U.S. The total tonnage of marine port shipments for all waterfront counties in the United States increased from about 1.16 billion tons in 1997 to over 1.51 billion tons in 2010, a 30 percent increase, and is forecast to increase to over 1.89 billion tons in 2020. The total value of marine port shipments in all U.S. waterfront counties increased from \$961 billion in 1997 to \$1,640 billion in 2010 (+71%), and is forecast to be \$2,364 billion in 2020. The Western Gulf of Mexico region had the highest total weight of shipments in 2010 (645 million tons), followed by California (217 million Tons), and Middle Atlantic (161 million Tons). California had the highest marine port shipments value in 2010 (\$461 billion), followed by the Western Gulf of Mexico (\$368 billion), Middle Atlantic (\$302 billion), and South Atlantic (\$239 billion) regions. The Pacific-California region had the greatest increase in tonnage during 1997-2010 (96%), followed by the South-Atlantic (63%) and Middle-Atlantic (42%) regions. The Pacific-Alaska region showed the greatest decrease in total shipping weight (-43%) followed by the Eastern- and Western-Great Lakes (-23, -19 percent), and North-Atlantic (-18%). The value of marine shipments increased in all regions from 1997 to 2010, except for the Eastern Great Lakes (-20%) (Tables 14-15).

Commercial fishing is an economic activity traditionally associated with working waterfront communities; however, the sustainability of commercial fishing is threatened in many areas of the U.S. The total landings in 2010 by commercial fisheries in the United States was 4.5 billion pounds with a value of \$2.70 billion, which represented a decrease of 17 percent and 18 percent, respectively, since 1990 in inflation adjusted dollars. The Alaska-Pacific region had the highest fishery landings in 2010, both in weight (1.76 billion pounds) and value (\$907 million). The regions with the next highest landed weights were the Western Gulf of Mexico (769 million lbs.), Middle-Atlantic (556 million lbs.), California (414 million lbs.), North-Atlantic

(392 million lbs.), and Pacific–Northwest (368 million lbs.), while regions with the next highest landed values were North-Atlantic (\$563 million), Middle-Atlantic (\$269 million), Pacific-Northwest (\$276 million), Western-Gulf of Mexico (\$150 million), and California (\$140 million). Sixteen counties in the U.S. landed over 100 million pounds of fish each in 2010. The counties with the largest fisheries landings in terms of value were Bristol County, Massachusetts (\$306 million), Aleutians West, Alaska (\$163 million), Kenai Peninsula, Alaska (\$150 million), Kodiak Island, Alaska (\$128 million), Bristol Bay, Alaska (\$101 million), Valdez-Cordova, Alaska (\$84 million), and Cape May, New Jersey (\$81 million). Oregon, Washington and Alaska were the only states to experience an increase in landed weight from 1990 to 2010 (+51%, +38%, +28%, respectively). The South-Atlantic region suffered the greatest decrease in landed weight (-63%), followed by the Eastern Gulf of Mexico (-57%), Pacific-California (-44%), Middle-Atlantic (-37%), Western Gulf of Mexico (-29%), and the North-Atlantic (-29%). States with a significant increase in the value of fishery landings from 1990 to 2010 were Maine (40%), New Jersey (31%), Florida-Gulf (30%), and Washington (25%); while Texas suffered the largest decrease (-76%), followed by Rhode Island (-72%), California (-63%), Mississippi (-62%), Alabama (-44%), Louisiana (-42%), and Maryland (-35%) (Tables 16-17).

Ocean-going cruise ships have become one of the premier venues for coastal tourism and recreation. Cruise ships calling at U.S. ports reported a total of 49.1 million passenger-nights in 2011; however, this represents a decrease of 12 percent from a total passenger volume of 55.6 million in 2004. There were 22 ports hosting active cruise lines in 2011, including 13 with annual volumes of at least one million passengernights. The top three cruise ports were in Florida: Ft. Lauderdale, Miami, and Port Canaveral (Brevard County), with passenger volumes of 10.2, 7.7, and 5.3 million, respectively. Other top ports were New York City (3.5 million), Los Angeles, California (3.2 million), Seattle, Washington (3.2 million), Anchorage, Alaska (2.1 million), Galveston, Texas (2.0 million), Tampa, Florida (1.8 million), New Orleans, Louisiana (1.5 million), Baltimore, Maryland (1.4 million), Hudson, New Jersey (1.3 million), and San Diego, California (1.1 million). Ports with the largest increase in cruise passenger volume during 2004-11 were Hudson, New Jersey (+102%), Baltimore (+65%), Seattle (+57%), Ft. Lauderdale (+8%), and New York City (+5%), while ports with decreased volume were Honolulu (-52%), New Orleans (-39%), San Diego (-32%), Galveston (-29%), Tampa (-29%), Los Angeles (-28%), Anchorage (27%), Miami (-21%), and Port Canaveral, Florida (-14%). Based on regression analysis, two ports are forecast to have significantly increased activity into the future (Seattle, Washington and Hudson, New Jersey), while three ports were forecast to have lower volume (Tampa, Florida, Mobile, Alabama, and Charleston, South Carolina) (Table 18).

Glossary of Economic Terms

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 fulltime, part-time and seasonal positions. It is not a measure of fulltime equivalents (FTE).

Exports are sales of goods to customers outside the region in which they are produced, and they represent a net inflow of money to the region. Exports are defined to also include sales of services to customers visiting from other regions.

Final Demand represents sales to final consumers, including households and 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 represents the sum of total value added by all industries in that region, and is equivalent to Gross Domestic Product (GDP) 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 440 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 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.

Indirect business taxes 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 region 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 may be traced backwards through the supply chain.

Intermediate sales are sales to other industrial sectors. The value of intermediate sales is netted-out of Total Value Added.

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 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.

Output-consumption ratio is the total industry output divided by the apparent consumption, for any given commodity or industry, and is a measure of the degree to which local demands are met by local production.

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 defines the geographic area for which impacts are estimated, usually an aggregation of several counties 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 an industry makes to a regional economy because it avoids double-counting of intermediate sales.

Economic Analysis of Working Waterfronts in the United States

Introduction

Waterfront communities in the United States, whether rural or urban, recreational or industrialized, have been subject to economic, technological, ecological, and demographic changes that have challenged their continued existence or revitalization. The purpose of this study is to help promote the long-term economic prosperity of coastal communities through a better understanding of their current status, their role in the regional and national economies, and their future prospects.

The report briefly reviews the relevant literature on economic valuation of waterfront and ocean-related economic activity. It was found that previous studies usually evaluated only one particular economic sector or a specific region. The present study is the first to attempt a comprehensive evaluation of all ocean related economic activity for all coastal regions of the United States.

Literature Review

A review of available data and literature was carried out to locate information resources and provide background, perspective, and motivation to the objectives and findings of this study. Previous studies published since 1990 were selected based on relevancy to ocean economic impacts. The review was divided into four categories: Ocean Economics Data, Statistical and Economic Surveys, Economic Impact Studies, and studies of Structural Change and Development. Studies and sources within each type are discussed below.

Ocean Economic Data

The primary source of economic data for this analysis was the National Ocean Economics Program (NOEP), which is a research arm of the Center for the Blue Economy at the Monterey Institute of International Studies. The NOEP compiles, organizes and distributes data on ocean and coastal related economic activity along the U.S. coasts and Great Lakes. Datasets or reference lists compiled and made available by NOEP include business activity that is directly or indirectly dependent on the ocean, and business activity that is located within the coastal regions of the U.S. Specific data sets include: fish landing weights and values at major fishing ports; tonnage and value of marine shipments moving through coastal ports; and, off-shore oil and gas production and value. Access to these datasets and other reports and articles is available through the NOEP website at www.oceaneconomy.org.

Another important source of ocean economic data is the "Economics: National Ocean Watch" database maintained by the National Oceanic and Atmospheric Administration (NOAA-ENOW), which contains annual data from 2005 through 2009 on establishments, employment, wages, and GDP for six sectors of ocean related economic activity at the state and county level for all coastal states including the Great Lakes. Weight and value data on commercial fish landings by fish species, and state and region, from 1950 through 2010, are published in the Annual Commercial Landing Statistics dataset by National Marine Fisheries Service (NOAA-NMFS).

Statistical and Economic Surveys

Changes from 1991 to 2001 in population, income, employment, minerals, fisheries and shipping for the five Gulf Coast states were reviewed by Adams et al. (2004). The report stresses the importance of balancing the demands of population growth, development, mineral extraction, and ecosystem management so that the value of shared natural resources can be maintained.

Statistics on economic activity for six ocean related economic sectors within U.S. coastal regions in 2005 and 2009 were assembled by Booz Allen Hamilton (2012). These results were derived from the ENOW data sets. Regional and state summaries for jobs and GDP are provided, with regional and sector differences noted. Tourism and recreation industries were the largest employers in the six major ocean related industry groups, with 72% of total jobs, while offshore mineral extraction generated the highest share of GDP among ocean industry sectors (41%). The living resources sector is the smallest ocean related industry in terms of employment and GDP, but constitutes a much larger share of ocean activity for rural coastal areas, making it important to a large geographic area of U.S. coastal regions. On a regional basis, the Gulf of Mexico produced the most GDP due to its extensive offshore mineral extraction activities, while the Mid-Atlantic and West Coast regions had the highest employment.

The National Marine Fisheries Service (NMFS) publishes statistical and economic reviews of the marine fisheries industry on an annual basis. The report "Fisheries Economics of the United States, 2009" (NMFS-2) includes comprehensive data on landings, revenues, expenditures, and the impacts of commercial and recreational fishing by region. Regional business statistics for fisheries related industries are also provided, including Seafood Sales and Processing, Transportation, Support services, and Marine Operations. The NMFS publication "Fisheries of the United States 2010" (NMFS-3) has extensive data on landings by species and ports for both commercial and recreational purposes. Statistics on world aquaculture production and commercial fishing are also included, along with imports and exports, supply of fish and processed fish products, number of seafood processing plants in the U.S., and U.S. seafood consumption over time.

Economic Impact Studies

Genter and Steinback (2008) conducted a comprehensive assessment of expenditures and economic impacts associated with recreational fishing activities for resident and nonresident anglers in the United States, by region and state. Results for expenditures were based on a nation-wide survey and economic impacts were estimated using an IMPLAN input-output model.

Carstensen et al. (2001) evaluated the impact of a commercial deep-water port in the state of Connecticut using both the Regional Economic Models Inc. (REMI) and IMPLAN input-output models. REMI, a dynamic model, was run for a 36 year period (2000-35) to model a transition to an equilibrium condition where the State's ports are shut down. Both models showed that Connecticut's port system is responsible for approximately \$2 billion in GDP and 27,000 jobs.

Maine is losing commercial and recreational waterfront property to residential development. Colgan (2004) assessed the contribution of working waterfronts to Maine's 2001 economy. The study showed that the economic contributions of working waterfront-related activities usually exceed those of coastal residential development and are more sustainable.

Lahr and Strauss-Wieder (2000) developed the MARAD Port Economic Impact Kit in conjunction with the U.S. Maritime Administration and the American Association of Port Authorities (AAPA). The Port Kit is a stand-alone microcomputer package with local and national economic impact models to evaluate the value of U.S. deepwater port operations.

Doorn and Lindquist (2009-11) documented efforts to evaluate the port industry and measure related economic activities in the Great Lakes and St. Lawrence Seaway region. The pros and cons of different input-output models used to estimate regional economic impacts were reviewed, including the MARAD Port Economic Impact Kit (U.S. Maritime Administration), IMPLAN (MIG, Inc.), RECON (Rutgers University), and RIMSII (U.S. Commerce Dept.). The investigators initially chose the MARAD Port Economic Impact Kit because it can use data on the types and amounts of cargo shipments through ports to generate estimates of direct employment, wage and GDP effects. They later found that MARAD does not include regional specific multipliers. In addition, the production functions of the MARAD model were outdated due to recent technological change in the industry.

Kildow and Colgan (2005) assessed the economic impacts of California's ocean economy within regions of the state for six ocean economic sectors over the period 1990-2000, and compared the results to statistics for the nation and other major coastal regions of the U.S. Economic impacts were estimated for employment, earnings, and value-added using IMPLAN. Tourism and marine transportation sectors saw increasing economic activity during this period, while fishing declined.

Judith Kildow evaluated Florida's ocean and coastal economy in 2006 and 2008. In Phase I, the author presented an overview of the value and size of Florida's ocean and coastal economy with comparisons among individual counties and to other coastal states. A number of economic indicators were evaluated from 1990 to 2003. Economic impacts of market based activities were estimated for 2003 using IMPLAN, while non-market use values of recreational and natural resources were estimated based on previous studies and current visitor statistics. In Phase II of the study, more detailed information was presented on ocean related activities during 1990-2007 for the passenger cruise industry, commercial and recreational fishing, coastal real estate, marine research and education institutions, coastal construction activities such as beach re-nourishment and dredging, and marine transportation and port activities.

Lichtman-Bonneville, Leong, and Russell (2010) estimated the economic impacts of activities related to Wisconsin's commercial marine ports, including freight and passenger transportation, marine services, cargo handling, commercial fishing, ship and boat building, port administration, and U.S. Coast Guard activities. Their study provides profiles of Wisconsin's eight ports, summarizing the types and volumes of cargo handled in 2008, and the types and capacities of various infrastructure, facilities and equipment available at each port.

Martin Associates (2011) analyzed the local and regional economic impacts of the port of Portland, Oregon. This study was unique in that it not only encompassed marine port functions, but also general aviation, international passenger airports, and industrial parks near the port. The combined impacts of these public facilities for 2011 were estimated at over 26,000 jobs, \$4.6 billion in revenues, and \$1.7 billion in personal income. In a national study commissioned by the American Association of Port Authorities, Martin Associates (2011) estimated the economic impacts of U.S. ports and port-related activities for all coastal regions of the United States. Port-related economic activities were broadly defined to include any production processes or activities that involve commodities moving through ports. The direct, indirect and induced employment impacts of U.S ports themselves were estimated at 1.33 million jobs, while the broader port-related activities were estimated to be almost ten times larger, at 13.32 million jobs. The total output (revenue) impacts of U.S. ports in 2007 were estimated at \$100 billion, and output impacts of related activities by importers and exporters were estimated to exceed \$3 trillion.

Another study by Strauss-Wieder Inc. and the New York Shipping Association Inc. (2011) evaluated the economic impacts of the New York-New Jersey maritime port industry on a 31-county region of New York, New Jersey and Pennsylvania during 2010. The authors used a customized version of the U.S. Maritime Administration's Port Economic Impact Kit (MARAD) and the Rutgers RECON model to estimate impacts. The study also analyzed past and expected future impacts of capital investments to the region's port infrastructure.

Structural Change and Development

An international comparative study by Becker (2010) analyzed the management and development of the Cities of Hamburg, Germany and Tampa, Florida around their ports. It was found that the development and revitalization of the Tampa port area has been slower than expected because the city did not adapt to new technology and never developed a cohesive approach to integrating port business activities with adjacent residential communities or recreational activities. Also, it was noted that a key difference between the two cities is that the Hamburg port authority is locally elected while Tampa Bay has been largely managed at the State level.

Kotval and Mullin (2010) reviewed the evolution of port communities and sustainable waterfront revitalization in relation to trade agreements, environmental issues, and consumer preferences. The authors concluded that, to be successful, port communities must have strong long-term planning that addresses how to integrate water-dependent or water-related activities into an overall city design. Factors deemed important to future prosperity include land-use compatibility and sustainability, marketing and promotion, an effective regulatory environment, and mutually beneficial trade and international competition.

Despite its vast interior, economic activity in the U.S. remains overwhelmingly concentrated on its coasts. Econometric analysis by Rappaport and Sachs (2003) attributed this to the large contribution that coastal proximity has on productivity and quality of life. They note that coastal economic growth increasingly stems from quality of life factors.

Sieber (1991) explored the process of waterfront redevelopment and revitalization for North American port cities from an economic, anthropologic, and cultural perspective. It was concluded that waterfront revitalization is a phase in a longer evolutionary process resulting from international economic restructuring, technological obsolescence, and privatization.

Slack (1993) posited that ports have become handicapped players in the global transportation system. Containerization and increasing economies of scale in shipping lines have put municipal port facilities at a disadvantage in negotiating rates with large international shipping lines. Containerization has also eased the transfer of cargo from one mode of transportation to another, thus making it possible for shippers to deliver cargo to interior destinations from a larger set of coastal ports.

Data and Methodology

Data

To assess the economic activity of working waterfront communities, data were acquired and compiled on industry employment, wages and Gross Domestic Product (GDP), for all coastal areas of the United States, including the Great Lakes, at the county, state, and regional levels, for the period 1990 to 2010. In addition, data for coastal areas was acquired on commercial fisheries landings, commercial shipping port volumes and values, and passenger nights on cruise ships.

The principal source of data for this analysis was the National Ocean Economics Program (NOEP), which maintains an interactive website (www.oceaneconomics.org) with extensive economic data resources for coastal areas of the U.S., as described by Colgan (2007). The "Coastal Economy" dataset has economic data on eleven major industry groups, whether they depend directly on the ocean or not, located in counties of coastal states of the U.S. The "Ocean Economy" dataset is limited to industries or activities that rely directly on the ocean, in counties that are adjacent to the coast, or within coastal zones as defined by the Coastal Zone Management Act. These ocean-dependent economic data are available for six sectors at the county level, or 23 industries at the state level, as shown in Table 1. The six major industry groups covered in the ocean economy dataset include Marine Construction, Living Marine Resources, Offshore Minerals, Ship and Boat Building, Coastal Tourism and Recreation, and Marine Transportation. The data for ocean-dependent activity within the Tourism and Recreation group reflect only business establishments within ZIP codes adjacent to the coasts, such that the activity can be reasonably attributed to the proximity to the waterfront.

The source for the NOEP Market data on establishments, employment, and wages is the Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), formerly known as ES-202 data, collected and distributed by the U.S. Department of Commerce, Bureau of Labor Statistics (DOC-BLS). Gross Domestic Product (GDP) data are acquired from the Bureau of Economic Analysis, which develops these estimates from a number of sources. For details on the structure and methodologies of the NOEP datasets see Colgan (2007). It should be noted that NOEP market data for the years 1990 to 2004 were generated by NOEP, while data for 2004 through 2009 were generated by the National Oceanic and Atmospheric Administration (NOAA), Coastal Services Center.

NOEP's Marine Living Resources Database, includes data on landed value and weight of fish for top fishing ports and species in coastal states, including the Great Lakes, by region, state, and port from 1981 through 2010. The Marine Ports and Cargo database provides access to information on value and weight of total cargo and containerized cargo imports and exports moving through ports in all coastal states including the Great Lakes from 1997 through 2011. Data on volume and value of crude oil, natural gas, and condensate

Table 1. Ocean economic sectors and classification within the North American Industry Classification System (NAICS) and *IMPLAN*

Ocean Economy Sector	Ocean Economy Industry name	NAICS Code	NAICS Industry Name (1997 NAICS)	IMPLAN Code	IMPLAN Sector Name	
Construction - Marine	Marine Related Construction	237120 237990	Oil & Gas Pipeline & Related Struct. Other Heavy & Civil Engin. Constr.	36	Construction of other new nonresidential structures	
	Fish Hatcheries & Aquaculture	112511 112512	Finfish Farming & Fish Hatcheries Shellfish Farming	14	Animal production, except cattle, poultry, eggs	
Living Resources -	Fishing	114111 114112	Finfish Fishing Shellfish Fishing	17	Fishing	
Marine	Seafood Processing	311711 311712	Seafood Canning Fresh & Frozen Seafood Processing	61	Seafood product preparation & packaging	
	Seafood Markets	445220	Fish & Seafood Markets	324	Retail - Food & beverage	
	Limestone, Sand & Gravel	212321 212322	Construction Sand & Gravel Mining Industrial Sand Mining	26	Sand, gravel, clay, & other min. mining	
Minerals - Offshore	Oil & Gas Exploration and Production	211111 213111 213112 541360	Petroleum & Natural Gas Extraction Drilling Oil & Gas Wells Support Activates for Oil & Gas Ops.	20 28 29 369	Oil & gas extraction Drilling oil & gas wells Support activities for oil & gas operations Asshitatives and appropriate 8 related conve	
Ship & Boat	Dock Duilding C. Donoth		Geophysical Expl. & Mapping Serv.	_	Architectural, engineering, & related serv.	
Building & Repair	Boat Building & Repair Ship Building & Repair	336612 336611	Boat Building & Repair Ship Building & Repair	291 290	Boat building Ship building & repairing	
перип	Boat Dealers	441222	Boat Dealers	320	Retail - Motor vehicle & parts	
Tourism & Recreation Coastal	Eating & Drinking Places	722110 722211 722212 722213	Full Service Restaurants Limited Service Eating Places Cafeterias Snack & Nonalcoholic Beverage Bars	413	Food services & drinking places	
	Hotels & Lodging Places	721110 721191	Hotels & Motels Bed & Breakfast Inns	411 412	Hotels & motels, including casino hotels Other accommodations	
	Marinas	713930	Marinas	409	Amusement parks, arcades, & gambling	
	RV Parks & Campsites	721211	RV Parks & Recreational Camps	412	Other accommodations	
	Scenic Water Tours	487210	Scenic & Sightseeing Transp., Water	338	Scenic & sightseeing transp. & support act.	
	Sporting Goods Retailers	451110	Sporting Goods Stores	328	Retail Stores: Sporting goods	
	Amusement & Recreation Services	487990 611620 532292 713990	Scenic & Sightseeing Transp., Other. Sports & Recreation Instruction Recreation Goods Rental Other Amusement & Recreation Serv.	338 393 363 410	Scenic & sightseeing transp. & support act. Other educational services Gen. & cons. goods rental except video Other amusement & recreation industries	
	Zoos and Aquaria	712130 712190	Zoos & Botanical Gardens Nature Parks & Other Similar	406 Museums, historical sites, zoos, & p		
	Deep Sea Freight Transportation	483111 483113	Deep Sea Freight Transportation Coastal & Great Lakes Freight Transp.	334	Water transportation	
	Marine Passenger Transportation	483112 483114	Deep Sea Passenger Transportation Coastal & Great Lakes Passenger Transp.	334	Water transportation	
Trans- portation - Marine	Marine Transportation Services	tation 488310 Port & Harbor Operations 488320 Marine Cargo Handling 488330 Navigational Services to Shipping 488390 Other Support Act. for Water Transp.		338	Scenic & sightseeing transportation & support activities	
	Search & Nav. Equip.	334511	Search, Detection, Nav. Guidance, Aero. & Naut. System & Inst. Manuf.	249	Search, detection, & navigational instrument manufacturing	
	Warehousing	493110 493120 493130	General Warehousing & Storage Refrigerated Warehousing & Storage Farm Product Warehousing & Storage	ehousing & Storage Warehousing & Storage 340 Warehousing & storage		

Sources: Colgan, Charles S. A Guide to the Measurement of the Market Data for the Ocean and Coastal Economy in the National Ocean Economics Program, January 2007; MIG Inc., *IMPLAN* Sector descriptions and NAICS bridge for the 440 IMPLAN sector scheme.

oil production by region and state, from both state and federal off-shore oil and gas leases, are available for years 1970 through 2010 in the NOEP Off-Shore Minerals Database.

Methodology

Ocean Economic Regions

Economic regions were devised for this analysis based primarily on the bodies of water bounding the United States' coastline (Atlantic Ocean, Pacific Ocean, Gulf of Mexico, Great Lakes), and were further subdivided by geographic direction (north, south, east, and west) or by individual states sharing a coastline, as shown in Figure 1. Table 2 shows the states comprising eleven coastal economic regions created for this analysis. Note that parts of Florida, New York, Pennsylvania and Michigan were allocated to two different regions based on coastal proximity. There were a total of 444 coastal counties included in the study. Maps of counties included in each region are presented in Appendix B.

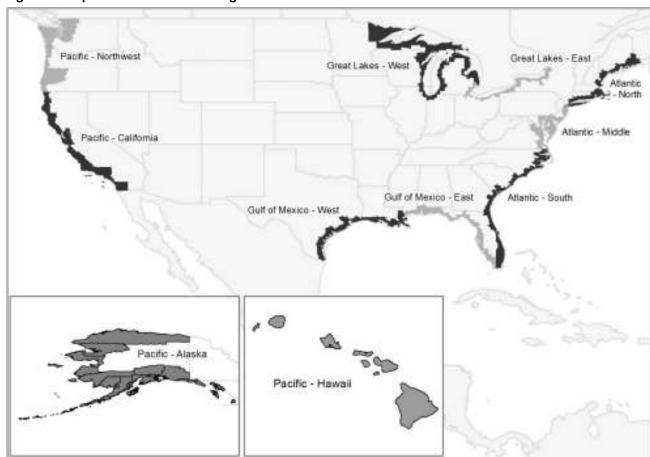


Figure 1. Map of coastal economic regions in the United States

Table 2. U.S. coastal regions for economic analysis of working waterfronts

Region- State	Region-State
Atlantic – North	Gulf of Mexico – West
Connecticut	Louisiana
Maine	Texas
Massachusetts	Pacific – Hawaii
New Hampshire	Hawaii
New York (Atlantic coast)	Pacific – California
Rhode Island	California
Atlantic – Middle	Pacific – Northwest
Delaware	Oregon
Maryland	Washington
New Jersey	Pacific – Alaska
Pennsylvania (Atlantic coast)	Alaska
Virginia	Great Lakes – West
Atlantic – South	Illinois
Florida (Atlantic coast)	Indiana
Georgia	Michigan (Lake Michigan coast)
North Carolina	Minnesota
South Carolina	Wisconsin
Gulf of Mexico – East	Great Lakes – East
Alabama	Michigan (Lake Huron/Ontario coast)
Florida (Gulf coast)	New York (Lake Erie coast)
Mississippi	Ohio
	Pennsylvania (Lake Erie coast)

Inventory of Working Waterfront Communities

To inventory the current status of the nation's waterfront communities, ocean related economic activity was evaluated as a share of the total economy in coastal regions, states and counties, using the NOEP Coastal and Ocean Economy data cross-tabulated for 2009 by location, and economic sector or industry. The overall approach to identify counties and states that are important with respect to ocean related coastal economies was to first evaluate the absolute and relative size of these sectors or industries within the overall economy. Data disclosure or confidentiality issues were a significant complicating factor in completing this part of the analysis. To protect confidentiality of individual businesses, the BLS and BEA are required to suppress data whenever there are fewer than 4 observations for a particular industry within a geographic unit. This was a significant issue at the county level, even at the six sector level of aggregation for the ocean economy data set. Of a total of 2,688 Ocean Economy County-level observations (six sectors for 448 counties) for 2009, only about 1,000, or 38 percent, were complete, while another 38 percent had suppressed numbers for all economic indicators except the number of establishments, and the remaining

630 observations (24 percent) were completely suppressed. To mitigate the consequences of this data suppression for observations with only establishment data, the state-level average employment, wages, and GDP per establishment were calculated for each of the six sectors within the eleven economic regions, and then multiplied by the available establishment numbers to impute specific values. For counties with no information disclosed on establishment, no assessment or impact analysis was possible.

Analysis of Regional Economic Contributions

Estimating economic contributions or impacts requires data on direct economic activity of a specific type and corresponding industry-sector economic multipliers that represent the secondary (indirect and induced) impacts of that direct activity. For this analysis, the locations and time periods for the impact analysis were determined by the data available on the NOEP website. The most recent data for ocean related activity was 2009, and the geographic units for those data are the counties, states and regions already discussed in the inventory section.

Regional economic multipliers for the eleven coastal regions in this study were developed using the *IMPLAN* input-output analysis software (version 3) and county datasets for 2010 (MIG Inc.). The regions included all counties within 50 miles of the coast, as shown in Appendix B. The *IMPLAN* models were constructed using the Commodity Trade Flows methodology, with social accounts in the Social Accounting Matrix for households, local/state and federal governments included endogenously. Economic multipliers from these models capture the effects of industry input purchases: i.e. supply chain activity, known as "indirect" effects, and the effects of employee household and business owner spending in the local economy for personal consumption, known as "induced" effects. The total regional economic contribution represents the sum of 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 proximity to the coastal resource. Total value added multipliers for each coastal region and for *IMPLAN* sectors used in this analysis are summarized in Table 3.

A complicating factor is that the six-sector, county-level Ocean Economy data is much more aggregated than the 440 sector set of *IMPLAN* multipliers. Fortunately, the 23-industry state-level Ocean economy dataset is quite 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). Such a bridge table allows one to subdivide or disaggregate economic data to a more refined set of economic sectors. An adapted version of Colgan's bridge table is shown in Table 1. It includes an additional bridge between the 23 sectors NAICS designations and the IMPLAN 440 sector scheme. By using these

bridge tables in conjunction with a procedure similar to that used to fill in missing data for the inventory analysis, disaggregated industry data was imputed for coastal counties so that it could then be applied to the *IMPLAN* multipliers to estimate county-level contributions of ocean industries. This was done by first calculating the share comprised by each of the 23 Ocean industries for each coastal state's economy in 2009, then these 23 industry state-level shares were applied to the six-sector county-level data to split or disaggregate it into 23 industries, and finally the *IMPLAN* regional multipliers were applied to these imputed county-level values to estimate ocean-industry contributions for each county.

Forecast of Economic Activity

The NOEP Ocean Economy database provided time-series data for the period 1990-2009 for number of business establishments, employment, wages and GDP within coastal counties. Linear regression (ordinary least squares-OLS) was used to estimate trends over this period and to predict future economic activity at the county, state and regional levels. Historical wage and GDP values were adjusted to represent constant 2009 dollars using the GDP Implicit Price Deflator published by the U.S. Commerce Department, Bureau of Economic Analysis (USDOC-BEA), in order to remove the effects of general inflation. Only time-series with 3 or more observations were considered valid for the analysis. The OLS regression analysis was carried out in Microsoft Excel spreadsheets. It should be noted that data for county-level GDP was not available in the Ocean Economy dataset for the period 1990-96.

Table 3. Value added multipliers for ocean economic activities in eleven U.S. coastal regions

Sector Number	IMPLAN Sector Description	Atlantic North	Atlantic Middle	Atlantic South	Gulf East	Gulf West	Pacific HI	Pacific CA	Pacific NW	Pacific AK	Great Lakes East	Great Lakes West
14	Animal production, except cattle & poultry & eggs	2.86	3.58	3.33	3.01	2.61	2.20	3.22	2.93	2.57	3.00	2.89
17	Commercial Fishing	3.06	4.45	4.31	3.61	3.41	2.59	3.63	2.75	2.94	5.14	4.78
26	Mining & quarrying sand, gravel, clay, etc.	3.18	3.78	3.43	2.85	2.66	1.98	3.37	3.06	2.92	3.23	3.01
28	Drilling oil & gas wells	4.54	2.91	3.99	2.39	1.96	0.00	2.48	2.27	2.08	2.34	2.29
29	Support activities for oil & gas operations	5.34	5.38	8.39	4.02	3.00	13.34	4.51	4.36	2.56	3.81	4.47
36	Construction of other new nonresidential structures	3.32	4.10	3.83	3.71	3.13	2.12	3.82	3.25	2.59	3.62	3.57
61	Seafood product preparation & packaging	5.96	7.29	7.79	69.9	5.84	5.32	7.18	5.08	4.41	4.83	5.78
249	Search, detection, & navigation instruments manufacturing	3.99	4.61	4.45	3.99	3.39	3.37	4.49	3.78	0.00	3.89	4.08
290	Ship building & repairing	3.50	4.46	3.97	3.56	3.13	2.20	4.29	3.24	2.89	4.17	3.65
291	Boat building	3.88	4.75	4.06	3.74	3.26	2.37	4.78	3.48	3.10	3.43	3.87
320	Retail Stores - Motor vehicle & parts	3.47	4.17	3.77	3.57	2.98	2.27	3.94	3.24	2.72	3.61	3.67
334	Transport by water	3.31	4.07	3.82	3.51	2.84	2.57	3.89	3.30	2.98	3.82	3.50
338	Scenic & sightseeing transp. & support act. for transp.	3.13	3.77	3.48	3.22	2.63	2.19	3.50	2.89	2.65	3.33	3.23
340	Warehousing & storage	3.05	3.71	3.38	3.19	2.65	2.13	3.39	2.84	2.53	3.10	3.10
393	Other private educational services	3.44	3.91	3.57	3.43	2.89	2.38	4.02	3.40	2.92	3.51	3.37
406	Museums, historical sites, 200s, & parks	3.26	4.18	3.72	3.50	2.79	2.39	3.60	3.16	2.75	3.42	3.34
409	Amusement parks, arcades, & gambling industries	3.21	3.87	3.28	3.13	2.59	2.19	3.45	2.89	2.59	3.19	3.08
410	Other amusement & recreation industries	3.03	3.73	3.25	3.06	2.61	2.11	3.37	2.90	2.61	3.14	3.10
411	Hotels & motels, including casino hotels	3.23	4.02	3.54	3.33	2.75	2.13	3.66	3.07	2.74	3.40	3.38
412	Other accommodations	3.49	4.22	3.89	3.91	2.93	2.24	3.96	3.48	2.68	3.67	3.66
Source: I	Source: IMPLAN® Version 3.0, 2010, county and state-level data for the United States (MIG Inc., Hudson, WI, http://www.implan.com).	the Unite	d States (ľ	AIG Inc., F	ludson,	WI, http	://www	implan.c	om).			

Results

Inventory of Economic Activity in Working Waterfront Communities

A summary of regional and state ocean-related economic data for the number of business establishments, employment, wages and value-added (GDP) in 2009 is presented in Table 4. More detailed results for individual counties are provided in Appendix Table A1, and data for GDP by economic sector in individual counties are shown in Appendix Table A2. Results for regional ocean sector employment and GDP are charted in Figures 2 and 3, and results for coastal states are charted in Figures 4 and 5. Maps of ocean-related county-level GDP and employment in coastal regions are presented in Figures 6-19.

In 2009, all coastal regions of the U.S. had over 130,000 ocean-related business establishments, with 2.398 million employees (fulltime and part-time), who received \$84.25 billion in wages, and generated \$217.87 billion in Gross Domestic Product.

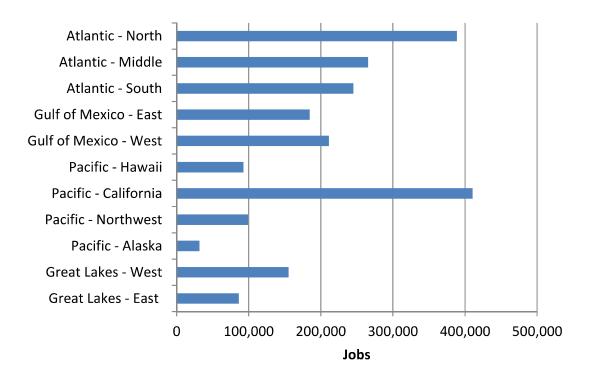
The western Gulf of Mexico region led the nation in both ocean-related GDP, at more than \$83 billion, and ocean-related wages of almost \$20 billion (Table 4 and Figure 3). This is largely due to its off-shore minerals sector, and water related tourism and recreation sector. The North Atlantic region had the largest ocean-related employment at 439,633 jobs (Table 4 and Figure 2) and number of establishments (30,955) among the eleven regions in 2009 due primarily to tourism and recreation. New York State was home to more than half of the ocean-related economic activity in the North Atlantic region, and Texas dominated the western Gulf of Mexico region. The top individual states with respect to ocean-related economic activity were New York with 20,671 establishments, California with 426,744 jobs (Figure 2 and 4), and Texas with \$67.1 billion in GDP or value added (Figure 5) and \$15.7 billion in wages. The next closet states in terms of ocean GDP were California with nearly \$31 billion and Florida at \$18.5 billion for both Atlantic and Gulf coasts combined. Florida also had the second highest ocean-related employment in the nation at 316,773 jobs, followed by New York at 293,674 jobs for its coasts on the Atlantic-North and Great Lakes-East (Figure 4).

Table 4. Summary of ocean-related economic activity in 2009 for thirty coastal states within eleven U.S. coastal regions

Coastai regions	,			
	_	Employment		
Region – State	Business	(fulltime	Wages	GDP
	Establishments	and part-	(million \$)	(million \$)
		time jobs)		
Atlantic - North	30,955	439,633	12,920	26,452
Connecticut	2,548	30,908	791	1,562
Maine	2,594	34,881	1,065	1,772
Massachusetts	5,079	77,135	2,536	4,596
New Hampshire	655	9,129	191	358
New York	18,160	259,504	7,684	16,839
Rhode Island	1,919	28,077	652	1,324
Atlantic - Middle	18,094	323,175	10,021	16,944
Delaware	927	16,275	359	663
Maryland	4,157	80,164	2,469	4,344
New Jersey	7,011	100,493	3,325	5,456
Pennsylvania	1,840	32,904	873	1,619
Virginia	4,159	93,340	2,995	4,862
Atlantic - South	14,512	258,729	6,190	14,310
Florida	8,706	146,960	4,058	9,644
Georgia	1,011	19,622	439	909
North Carolina	2,100	33,455	549	1,156
South Carolina	2,695	58,692	1,144	2,601
Gulf of Mexico - East	13,109	200,584	4,729	10,910
Alabama	950	18,244	514	1,508
Florida	11,294	169,813	3,993	8,893
Mississippi	865	12,527	221	509
Gulf of Mexico - West	8,255	237,968	19,928	83,476
Louisiana	3,207	80,719	4,177	16,367
Texas	5,048	157,249	15,751	67,109
Pacific - Hawaii	3,872	94,275	2,857	5,156
Hawaii	3,872	94,275	2,857	5,156
Pacific - California	19,003	426,744	15,394	30,795
California	19,003	426,744	15,394	30,795
Pacific - Northwest	6,878	119,783	4,714	9,899
Oregon	1,359	16,534	506	1,017
Washington	5,519	103,248	4,208	8,882
Pacific - Alaska	2,085	37,552	1,978	8,640
Alaska	2,085	37,552	1,978	8,640
Great Lakes - West	8,457	167,728	3,741	7,819
Illinois	2,471	76,658	2,201	4,731
Indiana	435	7,485	140	257
Michigan	3,364	44,877	774	1,572
Minnesota	301	5,434	83	176
Wisconsin	1,886	33,274	543	1,083
Great Lakes - East	5,665	92,062	1,774	3,378
Michigan	946	17,469	449	781
New York	2,511	34,170	568	1,150
Ohio	1,999	34,170	714	1,150
Pennsylvania	209	2,817	43	1,556
·				
Grand Total	130,885	2,398,233	84,246	217,870

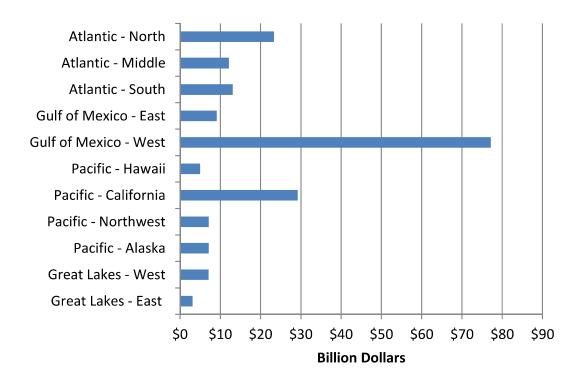
Source: National Ocean Economics Program, Ocean Economy Dataset.

Figure 2. Ocean-related employment in U.S. coastal regions in 2009



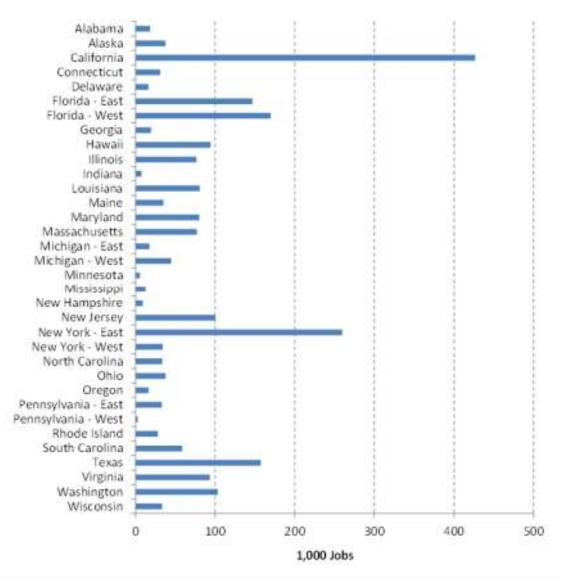
Source: NOEP, Ocean Economy County Data with missing values imputed

Figure 3. Ocean-related Gross Domestic Product in U.S. coastal regions in 2009



Source: NOEP, Ocean Economy County Data with missing values imputed

Figure 4. Ocean-related employment in U.S. coastal states in 2009



Source: NOEP, Ocean Economy County Data with missing values imputed

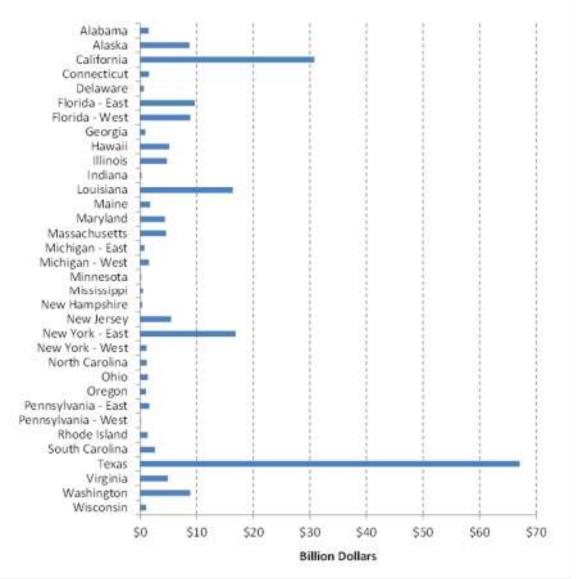


Figure 5. Ocean-related Gross Domestic Product in U.S. coastal states in 2009

Source: NOEP, Ocean Economy County Data with missing values imputed

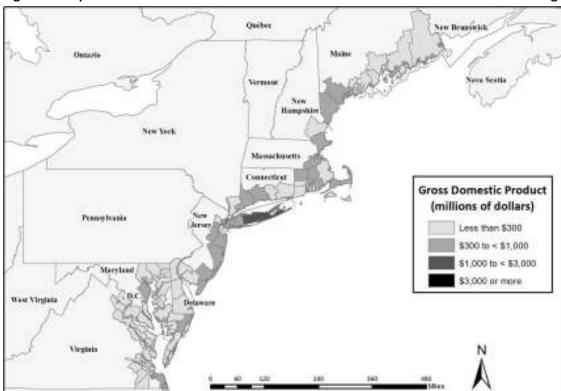


Figure 6. Map of ocean-related GDP in counties of the north and middle Atlantic coastal regions in 2009

Figure 7. Map of ocean-related employment in counties of the north and middle Atlantic coastal regions in 2009

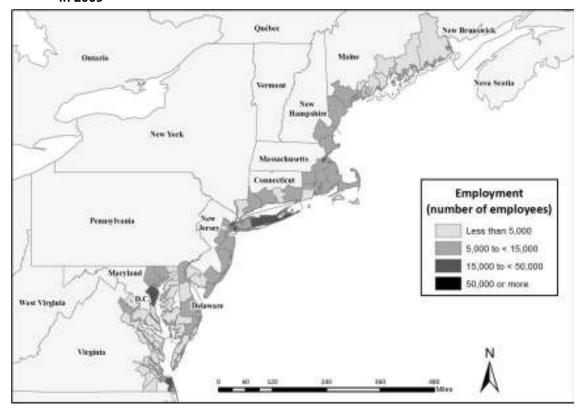
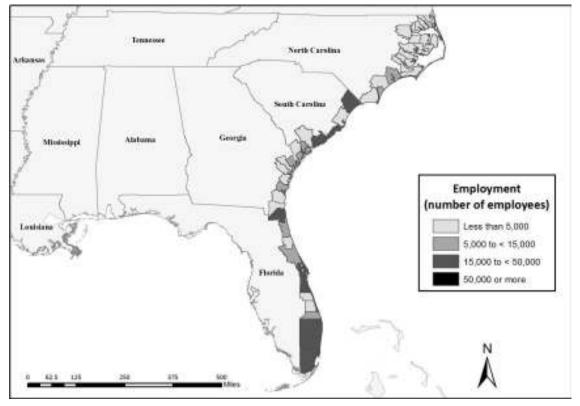




Figure 8. Map of ocean-related GDP in counties of the south Atlantic coastal region in 2009





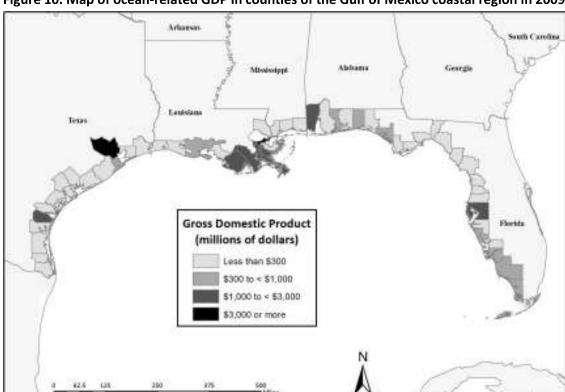
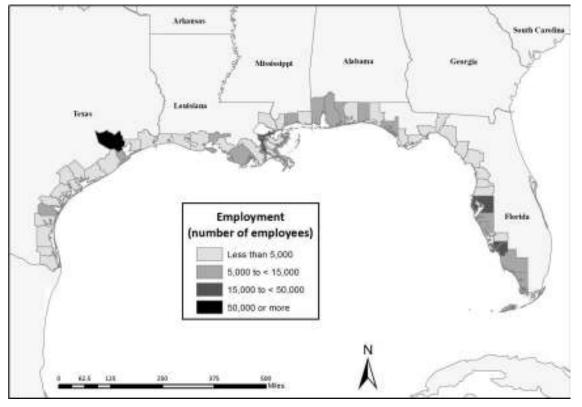


Figure 10. Map of ocean-related GDP in counties of the Gulf of Mexico coastal region in 2009





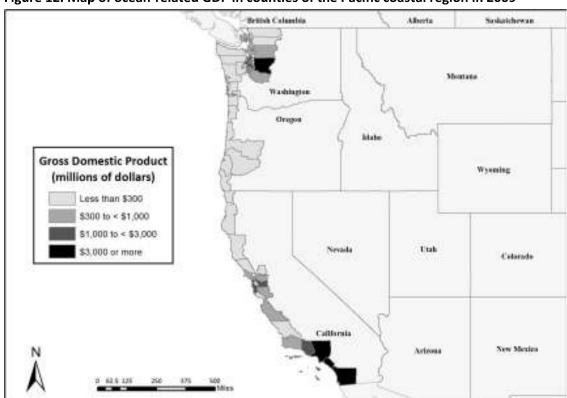


Figure 12. Map of ocean-related GDP in counties of the Pacific coastal region in 2009



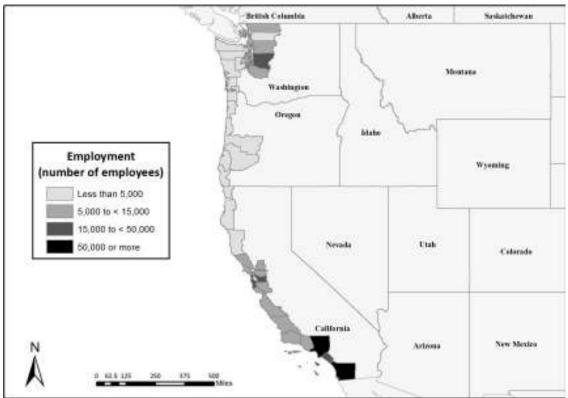
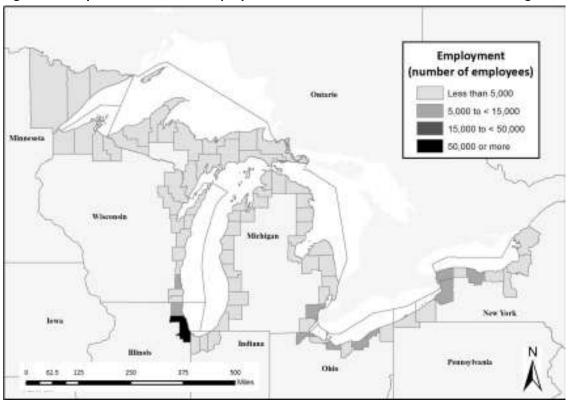




Figure 14. Map of ocean-related GDP in counties of the Great Lakes coastal region in 2009





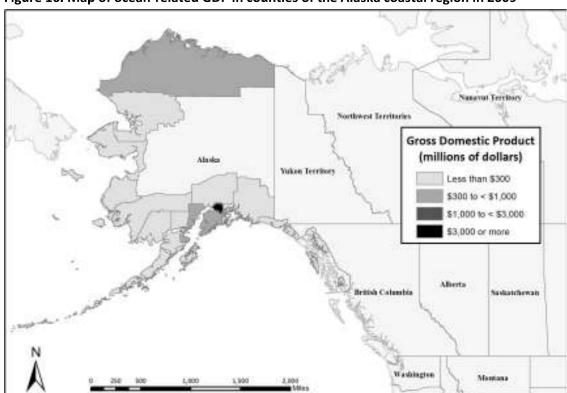


Figure 16. Map of ocean-related GDP in counties of the Alaska coastal region in 2009



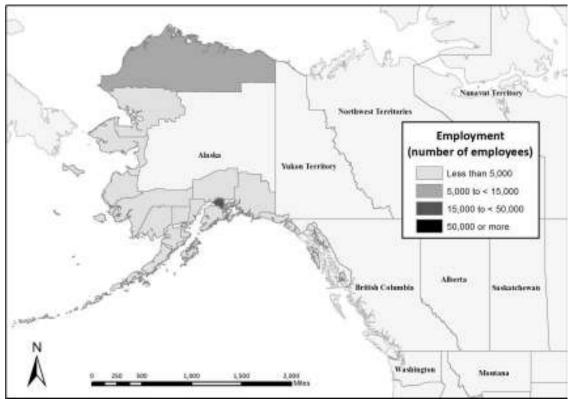


Figure 18. Map of ocean-related GDP in counties of the Hawaii coastal region in 2009

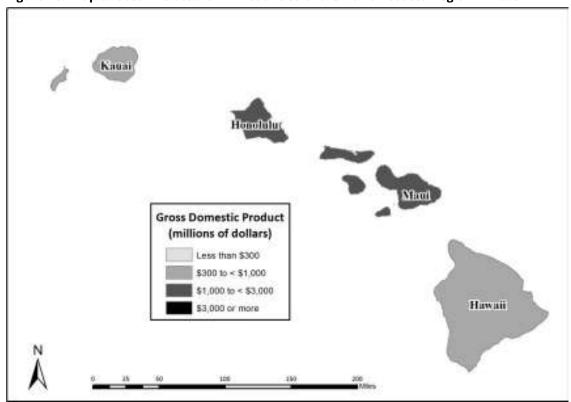
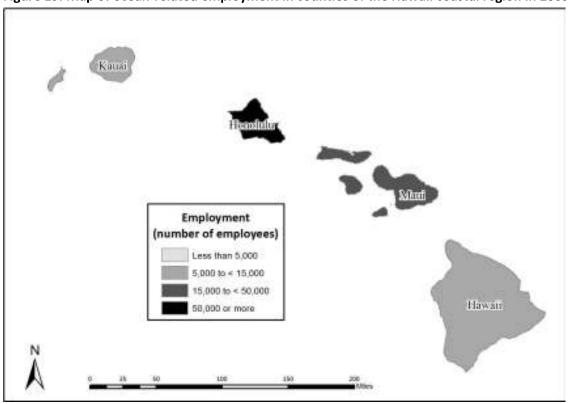


Figure 19. Map of ocean-related employment in counties of the Hawaii coastal region in 2009



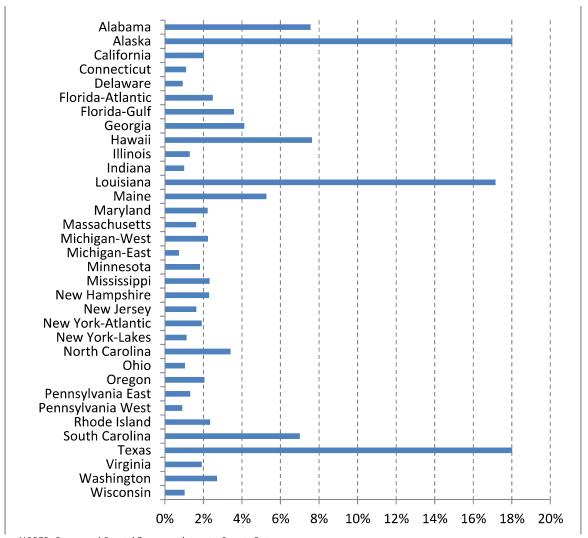
Ocean-Related Share of Coastal Economies

A way to evaluate the relative importance of the ocean economy for waterfront communities is in terms of its share of the overall coastal economy GDP or employment. The ocean sector share of total coastal county GDP and employment by state is presented in Figures 20 and 21, respectively. Maps of county-level share of ocean-related GDP and employment are presented in Figures 22-35. Alaska and Texas are essentially tied as having the largest share of ocean sector activity in their respective coastal economies of around 18 percent, followed closely by Louisiana at 17.2 percent (Figure 20). In all three of these states, the off-shore minerals industries are significant and represent more than 70 percent of their ocean economic activity. The minerals industry in Alabama represents the largest component in its ocean economy, but is relatively small in comparison to the leading states. Alabama also has significant activity in ship and boat building, tourism and recreation, and transportation industries. In contrast, tourism and recreation are the dominant ocean industries in Hawaii, Florida, Maine, and South Carolina, and along with Alabama, comprise a second tier of states where the ocean economic sectors represent four to seven percent of the total economic activity in coastal counties.

A somewhat different picture is painted by the share of ocean-related industry employment (jobs) by state in 2009 (Figure 21). By this measure, ocean-related industries are most important for Hawaii, South Carolina, and Alaska, where they represented more than 12 percent of employment in their coastal counties. States where ocean-related activities constituted more than eight percent of coastal county employment included: Alabama, Georgia, Louisiana, Maine, Mississippi, and North Carolina. A notable difference among states between the ocean sector share of GDP and employment is that more than 50 percent of the jobs were in the tourism and recreation industries, with the exception of Texas and Louisiana. This is not entirely surprising since many tourism and recreation enterprises are service oriented and thus more labor intensive. In contrast, the minerals industry tends to be more capital intensive and have relatively fewer employees per dollar of output.

The top 50 U.S. coastal counties in terms of the share of total GDP, employment, wages contributed by the ocean sectors in 2009 are shown in Table 5, in rank order by GDP share. Eleven of these top 50 counties are in the western Gulf of Mexico region and seven are in Alaska, reinforcing the importance of the off-shore minerals industry to working waterfront communities since these types of industries are prevalent in these two regions. It should be noted that the overall economies of some of these top 50 counties are relatively small, including 22 counties with GDPs of less than \$1 billion.

Figure 20. Ocean-related share of Gross Domestic Product in U.S. coastal states in 2009



Source: NOPEP, Ocean and Coastal Economy datasets, County Data

Figure 21. Ocean-related share of employment in U.S. coastal states in 2009

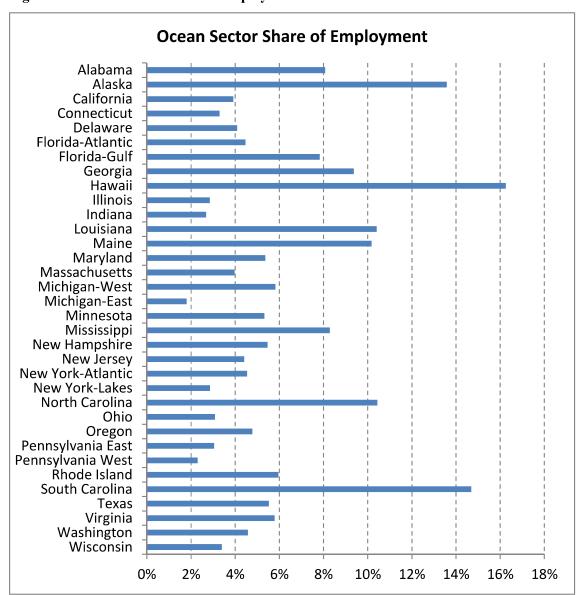


Table 5. Summary of GDP and share of ocean-related employment, wages, and GDP in 2009 for the top 50 U.S. coastal counties

Rank	Region	State	County	GDP (Million \$)	Share Employment	Share Wages	Share GDP
1	Gulf of Mexico – West	Louisiana	Vermilion	1,629	13.7%	17.8%	58.8%
2	Gulf of Mexico – West	Louisiana	Plaquemines	2,574	19.2%	20.8%	43.2%
3	Great Lakes – West	Michigan	Keweenaw	14	60.2%	50.7%	42.3%
4	Pacific – Alaska	Alaska	Bristol Bay	163	70.0%	61.7%	34.3%
5	Gulf of Mexico – West	Texas	Refugio	186	23.2%	27.0%	31.7%
6	Gulf of Mexico – West	Louisiana	Lafourche	4,585	13.2%	22.1%	29.3%
7	Gulf of Mexico – West	Louisiana	Orleans	22,955	12.8%	11.7%	28.5%
8	Pacific – Alaska	Alaska	Aleutians West	521	62.9%	52.3%	27.4%
9	Gulf of Mexico – West	Louisiana	Cameron	396	3.0%	5.4%	26.4%
10	Pacific – Alaska	Alaska	Kenai Peninsula	2,315	14.2%	11.4%	25.6%
11	Great Lakes – West	Michigan	Mackinac	271	29.0%	23.7%	23.6%
12	Pacific – Alaska	Alaska	Anchorage	22,031	11.4%	11.7%	23.6%
13	Gulf of Mexico – West	Texas	Harris	291,828	5.4%	12.0%	20.9%
14	Atlantic – Middle	Maryland	Worcester	1,501	29.4%	19.9%	20.1%
15	Pacific – Hawaii	Hawaii	Kauai	2,059	42.6%	29.6%	18.9%
16	Gulf of Mexico – East	Florida	Monroe	3,245	29.9%	21.1%	18.5%
17	Pacific – Hawaii	Hawaii	Maui	6,332	26.1%	21.9%	18.5%
18	Pacific – Northwest	Washington	Kitsap	8,477	12.5%	22.2%	18.4%
19	Atlantic – Middle	Virginia	Westmoreland	248	14.3%	9.3%	17.9%
20	Gulf of Mexico – West	Louisiana	Iberia	4,571	17.0%	20.2%	15.7%
21	Great Lakes – West	Minnesota	Cook	172	28.2%	16.9%	15.0%
22	Atlantic – Middle	Virginia	Portsmouth City	4,630	20.5%	30.8%	14.9%
23	Gulf of Mexico – West	Texas	Aransas	395	20.5%	17.4%	14.8%
24	Atlantic – South	Georgia	McIntosh	82	18.9%	11.4%	14.7%
25	Gulf of Mexico – West	Louisiana	Terrebonne	7,961	19.1%	21.9%	14.7%
26	Pacific – Alaska	Alaska	North Slope	6,606	43.3%	48.9%	14.5%
27	Atlantic – North	Massachusetts	Nantucket	429	24.5%	16.2%	14.2%
28	Pacific – Alaska	Alaska	Yakutat	16	27.6%	23.1%	14.2%
28 29	Atlantic – North	Maine	York	5,057	17.4%	23.1% 19.9%	13.5%
30	Gulf of Mexico – East	Florida	Walton	3,037 1,427	17.4% 19.4%	15.2%	13.5% 12.9%
30 31	Atlantic – North	Massachusetts	Dukes	636	18.9%	13.0%	12.7%
32	Atlantic – North Atlantic – South	South Carolina	Horry	7,234	21.2%	13.8%	12.7%
33	Atlantic – South Atlantic – Middle	New Jersey	потту Саре Мау	7,234 2,944	21.2%	13.6%	12.5% 12.1%
33 34		Washington	San Juan	2,944 392	22.0% 16.5%	10.7%	12.1% 11.2%
	Pacific – Northwest Atlantic – Middle	•	Queen Anne's	392 842	18.1%	10.7% 10.9%	11.2%
35 36		Maryland					
36	Atlantic – South Atlantic – South	North Carolina Florida	Hyde Nassau	180	17.6%	11.1%	10.9%
<i>37</i>				1,442	20.2%	12.3%	10.9%
<i>38</i>	Pacific – Hawaii	Hawaii	Hawaii Baaifia	5,931	17.6%	13.2%	10.6%
<i>39</i>	Pacific – Northwest	Washington	Pacific	441	15.2%	9.9%	9.9%
40	Atlantic – Middle	Virginia	Lancaster	306 1.735	13.8%	7.9%	9.8%
41	Atlantic – South	North Carolina	Dare	1,725	21.5%	15.8%	9.5%
42	Atlantic – North	Massachusetts	Barnstable	6,860 1,100	16.1%	9.5%	9.4%
43	Pacific – Northwest	Oregon	Lincoln	1,199	21.6%	12.7%	9.4%
44 45	Pacific – Alaska	Alaska	Valdez-Cordova	617	21.5%	12.9%	9.1%
45	Atlantic – North	Maine	Hancock	1,503	14.5%	9.9%	9.1%
46	Great Lakes – West	Wisconsin	Door	814	17.5%	9.8%	8.9%
47	Gulf of Mexico – East	Florida	Franklin	268	22.5%	13.9%	8.9%
48	Atlantic – South	Georgia _	Glynn	3,025	17.6%	9.7%	8.5%
49	Gulf of Mexico – West	Texas	Nueces	13,266	9.0%	6.7%	8.3%
50	Gulf of Mexico – East	Alabama	Mobile	14,998	6.7%	6.0%	8.2%

Figure 22. Map of ocean-related share of GDP in counties of the north and middle Atlantic coastal regions in 2009

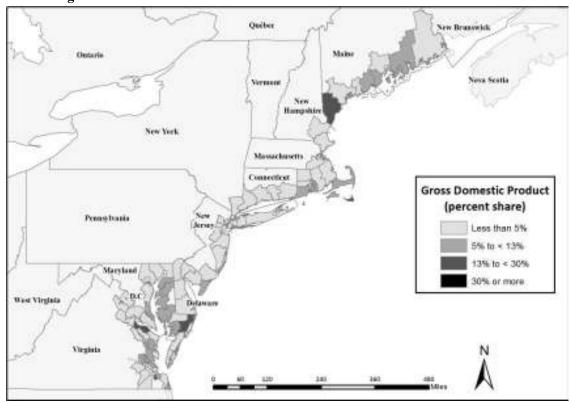
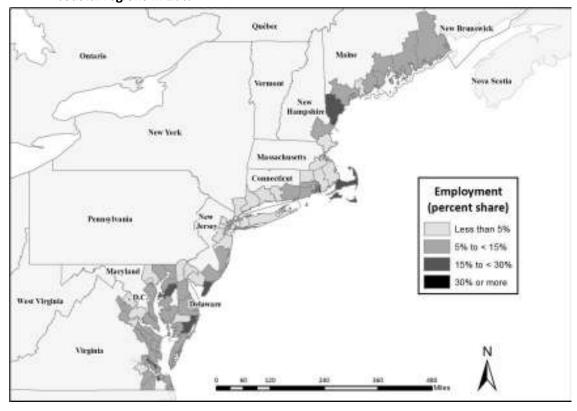


Figure 23. Map of ocean-related share of employment in counties of the north and middle Atlantic coastal regions in 2009



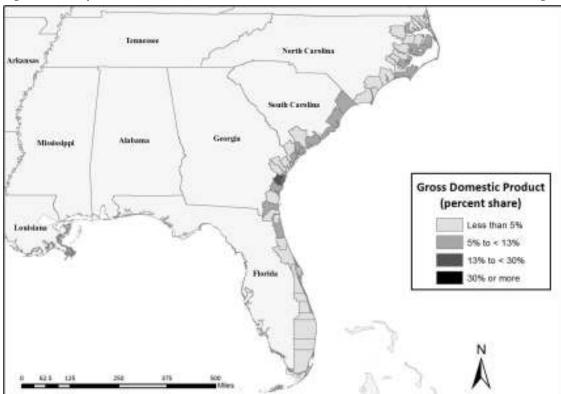
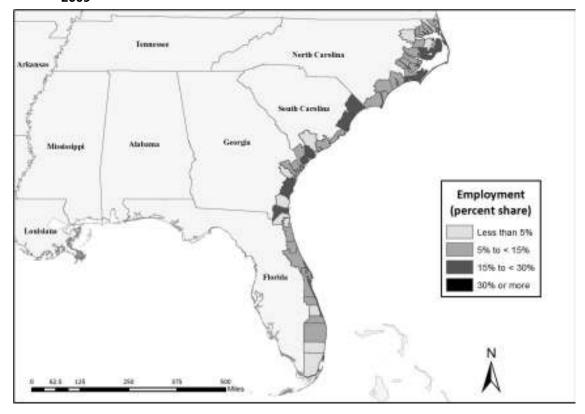


Figure 24. Map of ocean-related share of GDP in counties of the south Atlantic coastal region in 2009

Figure 25. Map of ocean-related share of employment in counties of the south Atlantic coastal region in 2009



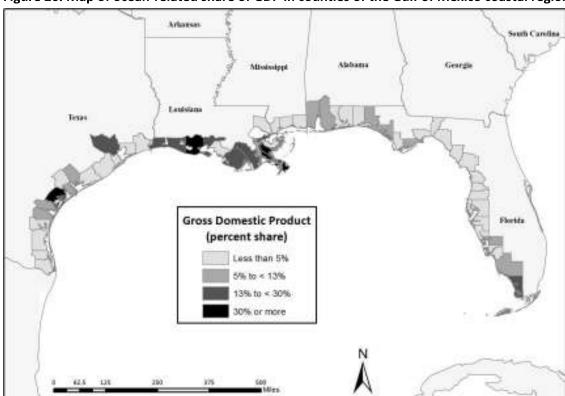
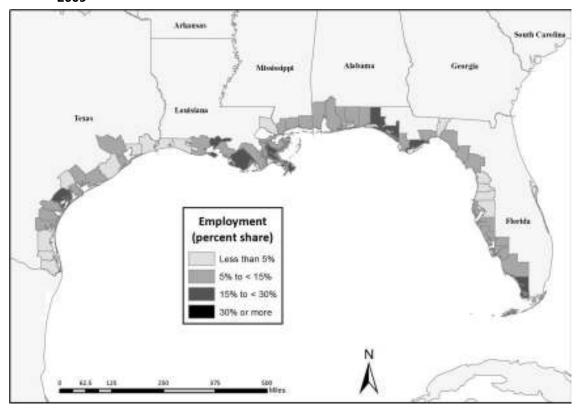


Figure 26. Map of ocean-related share of GDP in counties of the Gulf of Mexico coastal region in 2009

Figure 27. Map of ocean-related share of employment in counties of the Gulf of Mexico coastal region in 2009



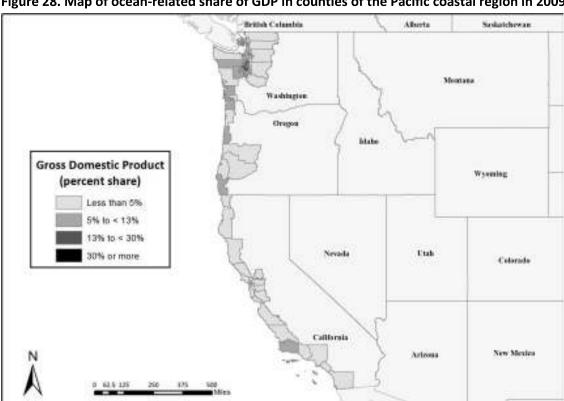
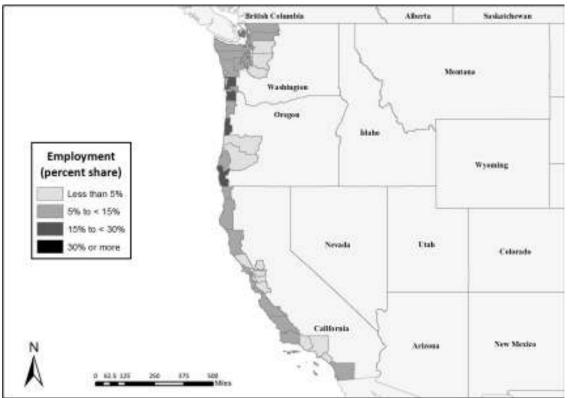


Figure 28. Map of ocean-related share of GDP in counties of the Pacific coastal region in 2009





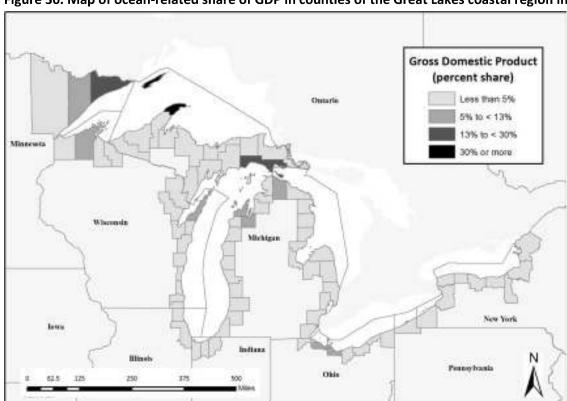


Figure 30. Map of ocean-related share of GDP in counties of the Great Lakes coastal region in 2009

Figure 31. Map of ocean-related share of employment in counties of the Great Lakes coastal region in 2009

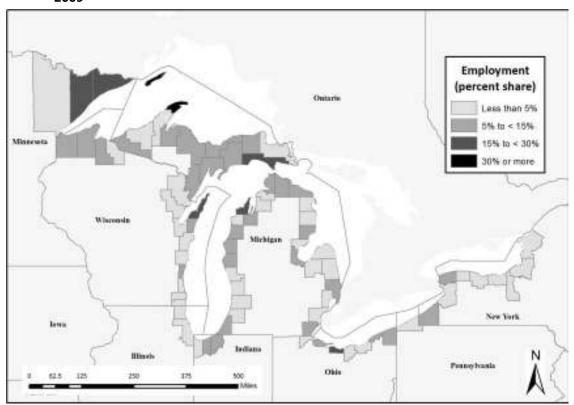




Figure 32. Map of ocean-related share of GDP in counties of the Alaska coastal region in 2009



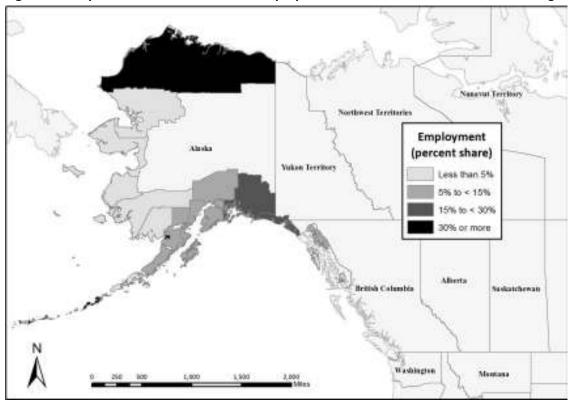


Figure 34. Map of ocean-related share of GDP in counties of the Hawaii coastal region in 2009

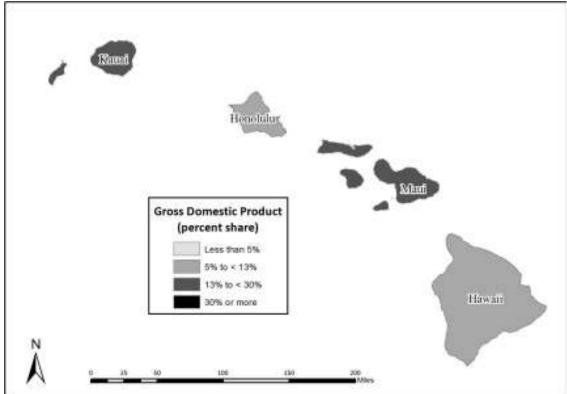
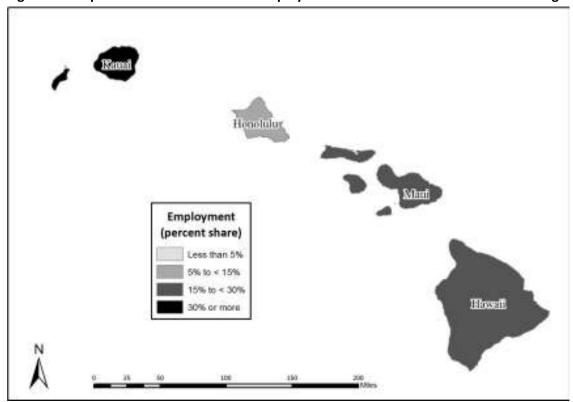


Figure 35. Map of ocean-related share of employment in counties of the Hawaii coastal region in 2009



Regional Economic Contributions

The total regional economic contributions or impacts, including indirect/induced multiplier effects, from ocean-related activities in coastal counties were estimated using regional multipliers, as discussed in the Methods section. Results for employment (jobs), wages, and value-added (GDP) contributions for regions and states are summarized in Table 6 for regions and Table 7 for states. Estimated contributions of ocean related activities for GDP, employment and wages are summarized by region in Figures 36 and 37, and in Table 6. The total estimated contributions of ocean industries in coastal counties across the U.S. in 2009 included 6.75 million jobs, \$284 billion in wages, and \$645 billion in value-added or GDP. These total contributions to employment, wages and GDP for the ocean economy represent implied multiplier effects of 2.81, 3.37, and 3.02, respectively. In other words, the total economic contributions are 2.8 to 3.4 times greater than the direct contributions. Nationally, the economic contributions of the ocean-related sectors averaged 15,238 jobs, \$642 million in wages, and \$1.46 billion in GDP per county among the 444 counties in the study, and wage contributions averaged around \$42,000 per job. However, ocean economy impacts varied considerably across regions, with the largest regions having contributions up to 17 times bigger than the smallest. The western Gulf of Mexico, Mid-Atlantic, and California were the largest regions in the nation's ocean economy, together accounting for 58 percent of total employment, 66 percent of total wages and 67 percent of total GDP contributions (Figures 36 and 37).

Estimated ocean economy contributions at the state level are summarized in Table 7 and Figures 38 and 39. The top 5 states in terms of ocean-related GDP contribution were Texas (\$155 billion), California (\$115 billion), Florida (\$64 billion), New York (\$60 billion), and Louisiana (\$36 billion) as shown in Figure 38. With respect to ocean-related employment contributions, the largest state was California (1,340,131 jobs), followed by Florida (914,582 jobs), Texas (817,556 jobs) New York (722,749 jobs) and New Jersey (289,275 jobs) (Table7). The difference in rankings among states in terms of GDP and job contributions is due to the large GDP generated by off-shore minerals industries, and the large job contributions generated by tourism and recreation industries.

The 50 counties generating the largest ocean related economic contributions are shown in Table 8. Unlike the 50 counties whose economies had the largest share of ocean related activity relative to their overall economies, these top 50 counties are comprised mostly of large population centers. The largest counties in terms of GDP contribution were Houston, Texas (\$140 billion), New York, New York (\$38 billion), and Los Angeles, California (\$37 billion). Geographically, the middle Atlantic region has the most counties (11) in the top 50 GDP category, starting with Suffolk County, New York (Table 9). The California Pacific coast is home to nine counties in this group, notably, Los Angeles and San Diego. The western Gulf of Mexico also has nine

of the top 50 counties, including Harris County (Houston), Texas, and Orleans County (New Orleans), Louisiana. Besides being large coastal cities that draw industry and visitors, such large developed population centers also tend to have bigger economic multipliers, which help generate larger economic contributions. Appendix Table A3 provides detailed GDP contributions at the Region, State, and County level for the six NOEP ocean sectors.

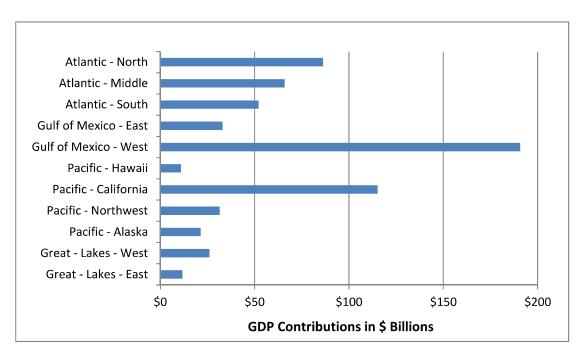
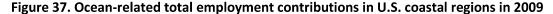


Figure 36. Ocean-related total GDP contributions in U.S. coastal regions in 2009



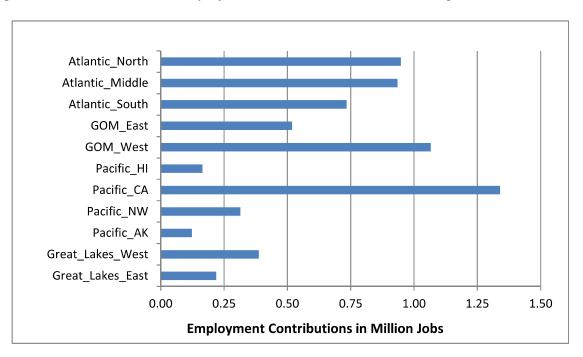


Figure 38. Ocean-related total GDP contributions in U.S. coastal states in 2009

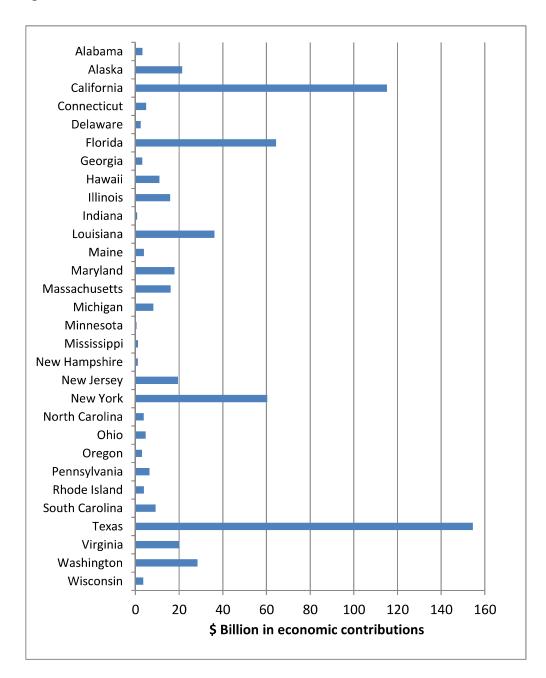


Figure 39. Ocean-related total employment contributions in U.S. coastal states in 2009

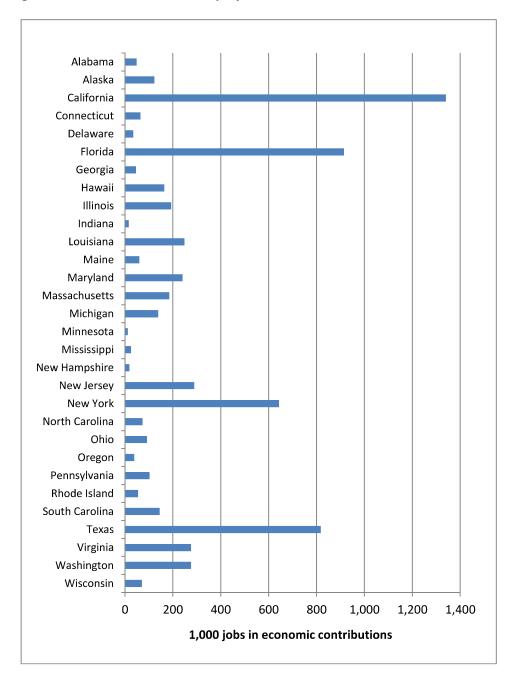


Table 6. Summary of total economic contributions of ocean-related industries in U.S. coastal regions in 2009

Region	Employment (fulltime & part-time Jobs)	Wages (Million \$)	GDP (Million \$)
Gulf of Mexico – West	1,066,374	66,401	190,730
Pacific – California	1,340,131	54,062	115,149
Atlantic – North	948,173	47,667	86,294
Atlantic – Middle	935,141	35,791	65,943
Atlantic South	733,935	22,002	52,063
Gulf of Mexico – East	518,687	15,321	32,989
Pacific - North West	314,387	13,150	31,454
Great Lakes – West	387,216	13,549	26,105
Pacific – Alaska	123,177	5,120	21,378
Great Lakes – East	219,397	6,002	11,724
Pacific – Hawaii	164,200	5,205	10,973
Grand Total	6,750,818	284,271	644,803

Regions ranked in order of GDP contribution

Source: NOEP Ocean economy county data and IMPLAN regional multipliers.

Table 7. Summary of total economic contributions of ocean-related industries in U.S. coastal states in 2009

	Employment		
Charles	(fulltime and	Wages	CDD (N4:11: ¢)
State	part-time Jobs)	(Million \$)	GDP (Million \$)
Alabama	48,661	1,423	3,276
Alaska	123,177	5,120	21,378
California	1,340,131	54,062	115,149
Connecticut	64,562	2,279	4,879
Delaware	34,234	1,128	2,390
Florida	914,482	28,121	64,455
Georgia	45,948	1,644	3,133
Hawaii	164,200	5,205	10,973
Illinois	193,398	7,638	15,883
Indiana	15,648	402	815
Louisiana	248,818	10,979	36,187
Maine	59,745	1,821	3,900
Maryland	240,460	9,054	17,894
Massachusetts	184,900	11,074	16,133
Michigan	139,457	5,049	8,132
Minnesota	11,454	230	516
Mississippi	25,359	549	1,165
New Hampshire	18,299	2,009	1,092
New Jersey	289,275	10,829	19,501
New York	643,298	30,848	60,377
North Carolina	73,038	1,655	3,787
Ohio	92,059	2,386	4,662
Oregon	38,549	1,354	3,031
Pennsylvania	102,342	3,431	6,476
Rhode Island	54,475	1,672	3,872
South Carolina	145,135	3,931	9,236
Texas	817,556	55 <i>,</i> 423	154,543
Virginia	275,591	11,523	19,979
Washington	275,838	11,796	28,423
Wisconsin	70,730	1,636	3,566
Grand Total	6,750,818	284,271	644,803

Table 8. Top 50 U.S. counties by GDP ocean-related economy contribution in 2009

Region	State	County	Employment	Wages	GDP
		•	(Jobs)	(Million \$)	(Million 9
Gulf of Mexico- West	Texas	Harris	661,379	49,354	139,51
Atlantic-North	New York	New York	305,104	16,481	38,46
Pacific-California	California	Los Angeles	381,761	17,333	37,62
Pacific-California	California	San Diego	216,897	8,840	19,25
Gulf of Mexico -West	Louisiana	Orleans	60,809	3,001	15,28
Great Lakes-West	Illinois	Cook	178,672	7,052	14,74
Pacific-California	California	Orange	160,639	6,562	13,6
Pacific-Alaska	Alaska	Anchorage	40,786	2,029	12,2
Pacific-California	California	San Francisco	116,201	5,476	11,5
Pacific-Northwest	Washington	King	104,156	4,643	10,7
Atlantic-South	Florida	Miami-Dade	87,725	3,381	10,5
Atlantic-North	New York	Suffolk	83,592	3,932	7,0
Gulf of Mexico-East	Florida	Pinellas	89,976	2,844	6,1
Atlantic-South	Florida	Broward	81,328	2,730	6,0
Pacific-California	California	Alameda	79,249	2,699	6,0
Pacific-Hawaii	Hawaii	Honolulu	98,550	2,878	5,9
Atlantic-South	Florida	Palm Beach	73,624	2,472	5,5
Pacific-Northwest	Washington	Kitsap	36,288	2,071	5,4
Atlantic-Middle	Pennsylvania	Philadelphia	80,047	2,774	5,4
Gulf of Mexico-West	Texas	Victoria	24,293	1,709	5,1
Atlantic-Middle	Maryland	Anne Arundel	58,175	2,425	4,4
Atlantic-North	Massachusetts	Middlesex	34,981	2,420	4,3
Gulf of Mexico-East	Florida	Hillsborough	57,277	1,906	4,0
Atlantic-South	Florida	Duval	65,375	1,815	4,0
Pacific-California	California	San Mateo	53,585	1,950	3,9
Atlantic-South	South Carolina	Charleston	58,857	1,646	3,8
Atlantic-Middle	Maryland	Baltimore City	43,392	1,690	3,7
Atlantic-Middle	New Jersey	Hudson	55,829	1,835	3,6
Pacific-California	California	Santa Barbara	41,555	1,641	3,4
Gulf of Mexico-West	Louisiana	Lafourche	20,030	1,037	3,3
Atlantic-Middle	Virginia	Norfolk	27,039	1,406	3,3
Atlantic-North	Massachusetts	Suffolk	34,519	1,717	3,2
Pacific-California	California	Santa Clara	32,030	1,514	3,2
Atlantic-Middle	Virginia	Virginia Beach	54,029	1,751	3,2
Atlantic-North	New York	Kings	40,465	1,495	3,1
Atlantic-South	South Carolina	Horry	50,249	1,296	3,1
Atlantic-Middle	Virginia	Portsmouth	38,385	2,032	3,0
Gulf of Mexico-West	Louisiana	St. Mary	16,202	1,035	2,8
Gulf of Mexico-West	Texas	Nueces	40,603	1,297	2,8
Gulf of Mexico-West	Louisiana	Terrebonne	44,137	1,674	2,8
Pacific-Hawaii	Hawaii	Maui	32,451	1,218	2,6
Gulf of Mexico-West	Louisiana	Plaquemines	9,277	428	2,5
Atlantic-Middle	New Jersey	Middlesex	43,106	1,408	2,5
Pacific-California	California	Monterey	30,809	1,225	2,5
Gulf of Mexico-East	Alabama	Mobile	32,662	1,035	2,4
Pacific-Northwest	Washington	Skagit	19,939	948	2,4
Atlantic-North	New York	Nassau	33,316	1,314	2,4
Atlantic-North	Connecticut	Fairfield	25,780	1,071	2,4
Gulf of Mexico-West	Louisiana	Vermilion	7,614	346	2,3
Gulf of Mexico-East	Florida	Lee	35,237	1,040	2,3

Note that Florida, New York, and Michigan have counties in two different coastal regions.

Trends and Forecast of Ocean Sector Gross Domestic Product

Statistical forecasts of future ocean-related economic activity in 2020 were estimated using ordinary least squares regression on historical county-level GDP data for the six ocean sectors available from the NOEP for 1997 to 2009, as described in the Methods section. There were 444 coastal counties in the NOEP dataset, with six sectors per county, giving a possible total of 2,658 forecasting regressions. Additional regressions were run on the sum of the sector values for each county, and likewise, on the sum of county values for each state, and state values for each region, which added another 485 regressions, or 3,143 in total. To perform the simplest linear OLS regression, a minimum of three observations is required. Numerous county-sector data series were partially or entirely suppressed and this left 1,666 potential data series to evaluate. Results are shown for regressions with non-zero slope coefficients, which were statistically significant at the probability (p-value) level of 0.05 or less. This left approximately one-fourth of the county-sector combinations. Summaries of these results are provided in Tables 9 through 13. The complete forecast results for all individual economic sectors and counties are provided in Appendix Table A4.

The number or count of county-sector combinations within each state and region that had statistically significant slope coefficients, either positive or negative, for the regressions of GDP over time are shown in Table 9, arranged by sectors in columns and by geographic area in rows. The numbers in the table cells represent the number of county-sectors that had significant positive or negative regression slope coefficients. Positive slope coefficients indicate an upward trend in sector activity over time, while negative coefficients indicate a downward trend over time. The numbers in the "net" columns in Table 9 represent the number of positive coefficients minus the number of negative coefficients. For example, the state of New York in the Atlantic–North region, for the Living Resources sector, there was one county that had a significant positive slope coefficient, and four counties that had significant negative slope coefficients, so the net difference in this case was minus three (-3). Using the net values allows one to see how individual sectors are changing across states and regions, or how states and regions are doing across sectors.

Numbers shown in the regional rows in Table 9 are the sum of the individual state numbers in that region, and the grand total row at the bottom equals the sum of all state counts for each sector. For the Living Resources sector, there were 12 significant county-sector regressions for all geographic units that trended significantly upward, while 60 county-sector regressions trended downward, resulting in a net of minus 48 county-sectors. For the Tourism and Recreation sector, there were 155 positive coefficients and 41 negative coefficients, giving a net of +114 county-sectors. Totals in the far right column of Table 9 sum the values across economic sectors for each region and state. For example, one can see that Maryland had 19 positive and 7 negative county-sector coefficients. States with the largest number of positive net change predictions

included Massachusetts, Maryland, Florida (Gulf coast), Texas, California, and Washington. States with the largest negative net predictions included Pennsylvania, Florida (Atlantic coast), Alaska, and Michigan.

Counts of significant regressions that predict increases or decreases in ocean-related county sectors between 2009 and 2020 in excess of 50 percent are presented in Table 10. Over 70 percent of the statistically significant regressions generated predictions of this magnitude, with a slight majority (52%) of these larger predictions being negative. Again, the sectors with the most negative net predictions were Living Resources and Transportation, while Tourism and Recreation, and Minerals had the most positive predicted changes of 50 percent or more. States with larger positive net predictions included Massachusetts, Maryland, the Gulf side of Florida, and Louisiana, while states with larger negative predictions included New Jersey, Virginia, the Atlantic side of Florida, Alaska, and the east side of Michigan.

The top 50 coastal county-sectors with the highest positive predicted percentage changes between 2009 and 2020 are shown in Table 11. The top five county-sectors are Chowan, North Carolina-Ship and Boat Building (500%), Cecil, Maryland-Transportation (263%), Mendocino, California-Transportation (243%), Dare, North Carolina-Ship and Boat Building (232%) and, Saginaw, Michigan-Tourism and Recreation (202%). It should be noted that these five county-sector changes are much smaller in absolute terms than other county-sectors with smaller percentage changes, such as Anchorage, Alaska, Orleans, Louisiana, and Harris, Texas (Table 11).

In Table 12, the 50 county-sectors with the largest predicted negative percent changes in GDP by 2020 are listed. These top 50 negative percentage changes all resulted in negative predicted values for 2020. In order to identify counties where waterfront communities may be threatened, these negative predicted values were used to rank county-sectors in terms of negative percentage change; however, in Tables 13 and A4, negative predictions were truncated at zero. The five county-sectors forecast to experience the largest negative change in GDP by 2020 include Living Resources in Arlington, Virginia, Ship and Boat Building in San Patricio, Texas, Living Resources in Northumberland, Virginia, Transportation in Aleutians West, Alaska, and Marine Construction in Cheboygan, Michigan (Table 12). It should be noted that all of the 50 county-sectors with the largest negative predicted changes were relatively small in absolute terms (less than \$25 million) in 2009 and are predicted to disappear by the year 2020.

Trends and forecasts of ocean economic activity for regions and states using aggregated county level time series are shown in Table 13. Forecasts are shown only for regressions that were statistically significant (P-values of 0.05 or less). About half of the regressions produced statistically significant slope coefficients. The largest predicted positive significant changes in percentage terms are shown to occur for Alaska, Texas, and Florida (Atlantic and Gulf coasts). The sole negative predicted change at the state level occurs in Hawaii.

These results do not correlate well with county-sector level regressions; it is suspected that these results
may not be reliable due to suppressed data at the county level.

Table 9. Summary of county level ocean-related sector GDP change predictions, positive or negative, 2009-20, by U.S. coastal region and state

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Table 10. Summary of county level ocean-related sector GDP change predictions exceeding 50 percent, positive or negative, 2009-20, by U.S. coastal region and state

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Table 11. Top 50 U.S. county ocean-related sectors with greatest positive percentage GDP change predicted in 2020

Region	State	County	Sector	Average Annual Change 1990-2009 (Million \$)	P value	Actual 2009 Value (Million \$)	Predicted Value 2020 (Million \$)	2009-20 change (%)
Atlantic – South	North Carolina	Chowan	Ship & Boat Building	2.3	0.02	9	52	500%
Atlantic – Middle	Maryland	Cecil	Transportation	10.9	0.00	46	167	263%
Pacific – California	California	Mendocino	Transportation	0.8	0.00	6	22	243%
Atlantic – South	North Carolina	Dare	Ship & Boat Building	4.1	0.00	27	89	232%
Great Lakes – West	Michigan	Saginaw	Tourism & Recreation	27.5	0.00	168	507	202%
Pacific – Alaska	Alaska	Kenai Peninsula	Minerals	68.4	0.03	504	1,510	200%
Atlantic – Middle	New Jersey	Salem	Transportation	10.3	0.05	57	171	199%
Great Lakes – East	New York	Chautauqua	Minerals	4.2	0.00	33	98	196%
Gulf of Mexico - West	Texas	Nueces	Minerals	83.2	0.00	715	2,041	186%
Atlantic – South	South Carolina	Charleston	Ship & Boat Building	16.6	0.03	116	329	183%
Pacific – Alaska	Alaska	Anchorage	Minerals	560.1	0.00	4,626	12,828	177%
Pacific – Northwest	Washington	Mason	Living Resources	2.3	0.00	20	54	172%
Pacific – Northwest	Washington	Snohomish	Minerals	7.1	0.03	43	117	169%
Great Lakes – West	Michigan	Muskegon	Transportation	1.4	0.00	14	37	164%
Atlantic – Middle	Maryland	Prince George's	Transportation	60.7	0.03	405	1,061	162%
Atlantic – North	Massachusetts	Suffolk	Living Resources	5.4	0.02	37	97	159%
Atlantic – North	New York	Kings	Ship & Boat Building	0.5	0.03	4	11	159%
Atlantic – North	Connecticut	Middlesex	Transportation	1.3	0.02	10	24	156%
Atlantic – North	Massachusetts	Norfolk	Living Resources	1.1	0.01	9	21	145%
Gulf of Mexico - East	Florida	Monroe	Living Resources	0.9	0.00	9	22	144%
Atlantic – South	Florida	Clay	Construction	2.9	0.01	27	66	143%
Atlantic – South	North Carolina	New Hanover	Construction	1.3	0.02	18	44	143%
Gulf of Mexico - East	Florida	Walton	Tourism & Recreation	24.1	0.04	185	448	143%
Pacific – Northwest	Oregon	Douglas	Construction	0.9	0.03	7	16	142%
Pacific – Northwest	Oregon	Washington	Construction	1.6	0.01	19	46	141%
Great Lakes – West	Michigan	Arenac	Minerals	0.5	0.02	4	9	141%
Gulf of Mexico - East	Florida	Bay	Ship & Boat Building	11.9	0.00	97	233	139%
Gulf of Mexico - West	Texas	, Refugio	Minerals	5.5	0.00	55	130	137%
Pacific – Northwest	Washington	King	Minerals	2.9	0.00	23	53	135%
Atlantic – Middle	New Jersey	Somerset	Construction	1.7	0.02	14	32	134%
Gulf of Mexico - West	Louisiana	Orleans	Minerals	489.1	0.01	5,467	12,749	133%
Pacific – California	California	Santa Clara	Minerals	4.5	0.05	37	86	132%
Atlantic – North	Maine	Hancock	Transportation	0.3	0.01	2	5	131%
Gulf of Mexico - East	Florida	Collier	Tourism & Recreation	66.4	0.00	602	1,375	129%
Atlantic – North	Rhode Island	Washington	Living Resources	4.2	0.00	44	99	126%
Gulf of Mexico - West	Louisiana	Lafourche	Minerals	78.3	0.00	791	1,770	124%
Atlantic – South	North Carolina	Beaufort	Construction	0.1	0.02	1	2	123%
Great Lakes – East	Pennsylvania	Erie	Minerals	1.5	0.01	14	32	123%
Great Lakes – East	Pennsylvania	Erie	Transportation	1.4	0.00	15	32	123%
Atlantic – Middle	Maryland	Dorchester	Tourism & Recreation	4.8	0.00	51	112	121%
Pacific – California	California	San Joaquin	Construction	0.5	0.04	9	21	120%
Atlantic – North	Massachusetts	Barnstable	Living Resources	0.9	0.00	11	23	119%
Pacific – Hawaii	Hawaii	Hawaii	Living Resources	0.5	0.00	6	13	113%
Pacific – Northwest	Washington	Snohomish	Transportation	1.5	0.00	18	39	118%
Pacific – Alaska	Alaska	Lake & Peninsula	Tourism & Recreation	0.3	0.04	3	7	117%
Gulf of Mexico - West	Louisiana	Terrebonne	Tourism & Recreation	10.9	0.00	105	228	117%
Atlantic – Middle	Maryland	Worcester	Tourism & Recreation	30.0	0.00	299	646	116%
Pacific – Northwest	Oregon	Douglas	Ship & Boat Building	3.8	0.00	37	79	115%
Gulf of Mexico - West	Texas	Harris	Minerals	4,962.0	0.01	58,820	126,208	115%
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Table 12. Top 50 U.S. county ocean-related sectors with greatest negative percentage GDP change predicted in 2020

Region	State	County	Sector	Average Annual Change 1990-2009	P value	Actual or Predicted Value in 2009	Predicted Value in 2020	2009-20 change
				(Million \$)		(Million \$)	(Million \$)	(%)
Atlantic – Middle	Virginia	Arlington	Living Resources	-1.0	0.04	0.01	-11.02	-132183%
Gulf of Mexico - West	Texas	San Patricio	Ship & Boat Bldg.	-6.7	0.04	0.50	-86.89	-17640%
Atlantic – Middle	Virginia	Northumberland	Living Resources	-3.7	0.00	0.40	-44.88	-11223%
Pacific – Alaska	Alaska	Aleutians West	Transportation	-3.0	0.02	0.37	-31.04	-8564%
Great Lakes - West	Michigan	Cheboygan	Construction	-1.7	0.05	0.24	-18.86	-7825%
Gulf of Mexico - West	Louisiana	St. Charles	Construction	-5.1	0.00	0.98	-55.57	-5743%
Atlantic – Middle	Virginia	Newport News City	Living Resources	-0.3	0.00	0.07	-3.77	-5200%
Atlantic – South	North Carolina	Brunswick	Living Resources	-3.6	0.01	0.84	-41.19	-5031%
Atlantic – South	Florida	Brevard	Minerals	-1.9	0.01	0.41	-20.02	-5010%
Gulf of Mexico - West	Louisiana	Orleans	Ship & Boat Bldg.	-10.2	0.00	3.53	-110.54	-3229%
Great Lakes – East	New York	Niagara	Construction	-1.2	0.04	0.44	-13.31	-3114%
Atlantic – Middle	Virginia	Fairfax	Transportation	-6.0	0.05	2.17	-63.79	-3034%
Atlantic – Middle	Pennsylvania	Philadelphia	Construction	-11.0	0.00	4.77	-132.26	-2875%
Gulf of Mex East	Mississippi	Harrison	Living Resources	-6.8	0.00	3.06	-71.29	-2433%
Atlantic – North	Maine	Knox	Living Resources	-2.5	0.02	1.16	-23.55	-2135%
Atlantic – Middle	Maryland	Dorchester	Living Resources	-6.7	0.00	3.29	-65.85	-2101%
Pacific – Alaska	Alaska	Dillingham	Tourism & Rec.	-0.3	0.00	0.18	-3.54	-2084%
Great Lakes – East	New York	Wayne	Construction	-0.2	0.00	0.13	-2.36	-1922%
Atlantic – Middle	New Jersey	Essex	Living Resources	-2.7	0.04	1.72	-30.62	-1876%
Atlantic – Middle	Virginia	Spotsylvania	Construction	-1.0	0.01	0.71	-12.52	-1867%
Atlantic – South	South Carolina	Georgetown	Transportation	-0.5	0.03	0.31	-4.91	-1676%
Atlantic – Middle	Virginia	Norfolk City	Living Resources	-1.6	0.00	1.21	-18.56	-1638%
Pacific – Alaska	Alaska	Bethel	Tourism & Rec.	-0.2	0.00	0.18	-2.57	-1490%
Atlantic – Middle	Virginia	Accomack	Living Resources	-7.9	0.00	5.44	-73.46	-1450%
Pacific - Northwest	Washington	Skagit	Living Resources	-2.6	0.00	1.29	-15.98	-13429
Pacific – Alaska	Alaska	Aleutians West	Tourism & Rec.	-0.6	0.00	0.56	-6.93	-1340%
Gulf of Mexico - East	Florida	Pinellas	Living Resources	-4.2	0.00	4.56	-49.58	-11879
Atlantic – South	Florida	Duval	Minerals	-1.7	0.00	1.57	-16.55	-1155%
Atlantic – South	North Carolina	Beaufort	Living Resources	-10.5	0.00	12.76	-122.93	-10639
Great Lakes - West	Michigan	Ontonagon	Tourism & Rec.	-0.2	0.04	0.22	-2.09	-10479
Gulf of Mexico - West	Texas	Cameron	Living Resources	-5.3	0.00	4.53	-39.47	-9719
Great Lakes - West	Illinois	Lake	Minerals	-0.1	0.02	0.14	-1.20	-929%
Gulf of Mexico - East	Florida	Bay	Transportation	-2.1	0.00	3.10	-24.75	-899%
Pacific – Alaska	Alaska	Haines	Tourism & Rec.	-1.8	0.00	2.45	-18.88	-871%
Gulf of Mexico - West	Texas	Brazoria	Tourism & Rec.	-7.7	0.00	9.57	-73.15	-865%
Atlantic – North	Massachusetts		Construction	-15.6	0.00	24.90	-188.63	-858%
Atlantic – South	Georgia	Glynn	Transportation	-1.5	0.02	1.95	-14.58	-849%
Atlantic – South	North Carolina	•	Living Resources	-1.6	0.00	2.15	-16.04	-8489
Atlantic – Middle	Virginia	Richmond City	Living Resources	-2.5	0.00	3.02	-22.46	-845%
Atlantic – South	Florida	Volusia	Transportation	-0.4	0.00	0.59	-4.32	-827%
Atlantic – South		Brunswick	Transportation	-1.9	0.02	2.62	-18.97	-825%
Atlantic – Middle	New Jersey	Passaic	Tourism & Rec.	-0.5	0.01	0.68	-4.63	-7779
Great Lakes – East	Ohio	Cuyahoga	Living Resources	-0.8	0.00	1.21	-7.68	-735%
Great Lakes - West	Minnesota	St. Louis	Transportation	-0.8	0.04	0.39	-2.45	-733%
Pacific – Alaska	Alaska	Kenai Peninsula	Transportation	-0.3	0.04	3.58	-2.43	-733 <i>/</i> -707%
Pacific – Alaska Pacific – Alaska	Alaska	Kenai Peninsula	Living Resources	-2.2 -6.2	0.00	12.31	-21.71 -74.44	-7079
Great Lakes - West	Michigan	Benzie	Tourism & Rec.	-0.2	0.00	4.22	-74.44	-6959
Atlantic – South	Florida	Volusia	Living Resources	-2.8 -0.4	0.00	0.58	-25.14	-6439
Augulu – Juuli	Florida	vulusid	FIAILIR VESORICES	-0.4	0.01	0.58	-3.13	-043%
Pacific - Northwest	Oregon	Clatsop	Living Resources	-3.7	0.00	6.81	-36.82	-6419

Table 13. Forecast ocean-related GDP in 2020 for U.S. coastal regions and states

Region – State	2009 value (Million \$)	Avg. Value 1997-2009 (Million \$)	1997 to 2009 change (%)	Coefficient of Deter- mination	Probability value (p)	Predicted value 2020 (Million \$)	Predicted value change 2009-20 (%)
Atlantic – North	25,585	21,751	41%	0.52	0.01	37,009	45%
Connecticut	1,496	1,822	-18%	0.07	0.39	,	
Maine	1,534	1,704	-4%	0.03	0.60		
Massachusetts	4,473	3,938	36%	0.86	0.00	5,645	26%
New Hampshire	334	351	-8%	0.06	0.43	,	
New York	16,661	13,007	61%	0.52	0.01	26,765	61%
Rhode Island	1,087	929	53%	0.14	0.21		
Atlantic – Middle	13,887	11,768	34%	0.57	0.00	19,903	43%
Delaware	554	550	57%	0.27	0.07		
Maryland	3,372	2,247	95%	0.74	0.00	5,319	58%
New Jersey	4,724	4,510	4%	0.10	0.29		
Pennsylvania	1,522	1,182	101%	0.84	0.00	2,616	72%
, Virginia	3,715	3,280	23%	0.27	0.07	,	
Atlantic – South	13,466	9,802	137%	0.61	0.00	23,437	74%
Florida	9,152	6,748	258%	0.71	0.00	18,884	106%
Georgia	800	675	24%	0.01	0.81		
North Carolina	1,001	920	5%	0.02	0.64		
South Carolina	2,514	1,978	65%	0.88	0.00	3,530	40%
Gulf of Mexico – East	9,577	5,792	265%	0.65	0.00	16,742	75%
Alabama	1,455	846	86%	0.05	0.47		
Florida	7,756	4,959	412%	0.81	0.00	15,546	100%
Mississippi	366	369	11%	0.15	0.20		
Gulf of Mexico – West	77,968	58,110	125%	0.82	0.00	157,629	102%
Louisiana	14,251	11,424	89%	0.66	0.00	24,509	72%
Texas	63,718	46,686	135%	0.82	0.00	133,121	109%
Pacific – Hawaii	4,991	3,630	6%	0.32	0.05	0	-100%
Hawaii	4,991	3,630	6%	0.32	0.05	0	-100%
Pacific – California	30,030	28,700	15%	0.12	0.24		
California	30,030	28,700	15%	0.12	0.24		
Pacific – Northwest	7,225	7,375	-6%	0.04	0.50		
Oregon	449	442	3%	0.22	0.11		
Washington	6,776	7,511	-7%	0.17	0.19		
Pacific – Alaska	7,164	6,176	113%	0.83	0.00	16,160	126%
Alaska	7,164	6,176	113%	0.83	0.00	16,160	126%
Great Lakes – West	7,288	6,818	23%	0.87	0.00	9,342	28%
Illinois	4,728	4,408	22%	0.74	0.00	5,827	23%
Michigan	1,222	1,151	28%	0.72	0.00	1,670	37%
Minnesota	152	94	93%	0.51	0.01	191	25%
Wisconsin	939	944	32%	0.70	0.00	1,533	63%
Great Lakes – East	3,266	3,437	2%	0.24	0.09		
Michigan	770	1,168	-38%	0.26	0.08		
New York	1,118	931	55%	0.92	0.00	1,549	39%
Ohio	1,293	1,202	20%	0.80	0.00	1,778	38%
Pennsylvania	85	136	-52%	0.27	0.07		
Grand Total	200,447	163,359	64%	0.91	0.00	319,271	59%

Note: negative predicted values were truncated at 0

Trends and Forecast of Port Shipping Activity

Tables 14 and 15 present information on marine port shipments by weight and value, respectively, between 1997 and 2010, along with percent change statistics and a forecast for 2020. The total tonnage of marine port shipments for all waterfront counties in the United States was about 1.16 billion tons in 1997 and almost 1.51 billion tons in 2010, a 30 percent increase. The forecast for 2020, based on linear extrapolation, puts the weight of marine port shipments over 1.89 billion tons (Table 14). The total value of marine port shipments in all waterfront counties in the United States was about \$906 billion in 1997, and just over \$1,551 billion in 2010, a 71 percent increase (all values are reported in 2010 dollars). The forecast for 2020 puts the total value of marine port shipments at nearly \$2,216 billion for that year, again, in 2010 dollars (Table 15).

Among regions in the United States in 2010, the Gulf of Mexico-West had the highest weight of shipments at 645 million tons, followed by Pacific—California at 216 M Tons, Atlantic-Middle (228 M Tons), Atlantic-South (117 M Tons), Pacific-Northwest (103 M Tons), and Atlantic-North (71 M Tons). The Pacific-California region also had the highest marine port shipments value of \$461 billion in 2010, followed by Gulf of Mexico-West (\$368 billion), Atlantic-Middle (\$302 billion), Atlantic-South (\$239 billion), Pacific-Northwest (\$109 billion), and Atlantic-North (\$106 billion).

Among individual states in 2010, Texas had the highest marine port shipments by weight at 374 million tons, followed by Louisiana (271 M Tons), California (216 M Tons), Washington (82 M Tons), New Jersey (67 M Tons), Virginia (67 M Tons), Pennsylvania (54.4 M Tons), Georgia (50 M Tons), Florida (37 M Tons), New York (35 M Tons), and Maryland (35 M Tons). Comparing the values of marine port shipments across states in 2010, California had the highest value of \$461 billion, followed by Texas (\$250 billion), New Jersey (\$126 billion), Louisiana (\$118 billion), Washington (\$96 billion), Virginia (\$88 billion), Georgia (\$88 billion), New York (\$83 billion), Florida (\$80 billion), and South Carolina (\$61 billion).

Individual counties with more than 30 million tons in marine port shipments in 2010 included Harris County in Texas (172 M Tons), Los Angeles County, California (158 M Tons), Orleans County, Louisiana (99 M Tons), Jefferson County, Texas (72 M Tons), St. James Parish, Louisiana (64 M Tons), Essex County, New Jersey (59 M Tons), Nueces, Texas (54 M Tons), Chatham County, Georgia (48 M Tons), Newport News (City), Virginia (47 M Tons) Galveston County, Texas (48 M Tons), Philadelphia County, Pennsylvania (42 M Tons), Baltimore City, Maryland (34 M Tons), Calcasieu Parish, Louisiana (34 M Tons), and New York County in New York (34 M Tons). Individual counties with more than \$30 billion of marine port shipments value in 2010 included Los Angeles County, California (\$381 billion), Harris County, Texas (\$154 billion), Essex County, New Jersey (\$121 billion), Newport News, Virginia (\$85 billion), New York County, New York (\$82 billion), Chatham County, Georgia (\$76 billion), Charleston County, South Carolina (\$61 billion), Alameda County, California (\$52 billion), King County, Washington (\$49 billion), Orleans Parish, Louisiana (\$46 billion), Baltimore City, Maryland (\$45 billion), Jefferson County, Texas (\$34 billion) and Pierce County in Washington (\$31 billion).

The overall trend between 1997 and 2010 shows an increase in the total marine port shipments by weight, however, the rates of increase among various region and states in the United States varied widely and some regions have decreased (Table 14). The Pacific-California region had the highest increase in tonnage, 96 percent between 1997 and 2010, while the Atlantic-Middle and Atlantic-South regions showed increases of 64 and 63 percent, respectively. The Pacific-Alaska region showed the greatest decrease in shipping weight (-43%) followed by Great Lakes-East (-23 percent), Great Lakes-West (-19 percent), and Atlantic North (-18 percent). In value terms, the overall trend of marine shipments from 1997 to 2010 also increased, however, like the weight of shipments, the rates of increase among various U.S. regions and states varied. From 1997 to 2010, the Atlantic-Middle region registered the highest increase (169 percent) in the value of marine port shipments, followed by Gulf of Mexico-West (147 percent), Gulf of Mexico-East (124 percent), Pacific-Hawaii (121 percent), Atlantic-South (61 percent), and Pacific-California (54 percent). Only the Great Lakes-East experienced a decrease in total value of marine port shipments (-20 percent) during the 1997-2010 time period.

There was also considerable variation in shipment trends within U.S. regions and states over time. For example, from 1997 to 2010 the Atlantic-Middle region experienced a 64 percent increase in shipment weight, while Pennsylvania showed an 11 percent decrease. Within the Atlantic-North region, with an 18 percent decrease in weight between 1997 and 2010, Connecticut's marine port shipments increased by 34 percent. Georgia had a 147 percent increase, while Glynn County decreased by 8 percent; in South Carolina, which experienced a 17 percent increase, Georgetown County had a 98 percent decrease. Shipping weights in Pinellas County, Florida decreased by 93 percent, while the Gulf of Mexico-East region overall had a 58 percent increase. Within the Atlantic-North region, with only a 17 percent increase, Rhode Island and New Hampshire had increases of 356 percent and 291 percent, respectively (Table 14).

While the value of shipments increased by 124 percent within the Gulf of Mexico-East region, that of Pinellas (St. Petersburg) and Escambia (Pensacola) Counties in Florida decreased by 43 and 48 percent respectively. Jefferson Parish in Louisiana saw a decrease in its shipping values by 46 percent from 1997 through 2010, while the state of Louisiana saw a 99 percent increase in the value of its marine shipments (Table 15).

Table 14. Summary of marine port shipments, weight basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county

		1997 (million	2010 (million	Obser-	Avg. Weight	1997- 2010 %	Slope of	Forecast 2020
Region State County	Port	tons)	tons)	vations	(million tons)	Change		(million tons)
Atlantic - North		86.6	71.4	14	82.9	-18%	-2.12	48.0
Connecticut		3.3	4.4	14	4.8	34%	0.14	7.1
Fairfield	Bridgeport	0.9	1.5	14	1.6	56%	0.08	3.0
Hartford	Hartford	0.0	0.0	14	0.0	-22%		
New Haven	New Haven	2.2	2.9	14	3.0	30%	0.06	4.0
New London	New London	0.1	0.1	14	0.2	-64%		
Maine		6.0	5.2	14	5.6	-14%		
Cumberland	Portland	3.7	3.0	14	3.7	-21%		
Hancock	Bar Harbor	0.0	0.0	14	0.0	-79%		
Knox	Rockland	0.0	0.0	8	0.0	-100%		
Penobscot	Bangor	0.0	0.1	14	0.0	954%		
Sagadahoc	Bath	0.0	0.0	9	0.0	-100%		
Waldo	Belfast	1.2	0.4	14	0.6	-69%	-0.06	0.0
Waldo	Searsport	0.8	1.3	14	1.0	51%	0.05	1.8
Washington	Eastport	0.2	0.5	14	0.3	142%	0.02	0.7
Washington	Jonesport	0.0	0.0	8	0.0		0.00	0.0
Massachusetts		13.6	16.7	14	17.9	23%	0.48	25.8
Barnstable	Provincetown	0.0	0.0	12	0.0			
Bristol	Fall River	0.9	0.6	14	1.5	-32%	0.11	3.3
Bristol	New Bedford	0.1	0.0	14	0.1	-85%	-0.02	0.0
Essex	Gloucester	0.0	0.0	14	0.0	78%		
Essex	Salem	0.8	0.7	14	0.8	-6%		
Plymouth	Plymouth	0.7	0.0	13	0.4	-100%	-0.05	0.0
Suffolk	Boston	11.1	15.3	14	15.1	38%	0.45	22.4
New Hampshire	2000	6.2	5.1	14	7.4	-17%		
Rockingham	Portsmouth	6.2	5.1	14	7.4	-17%		
New York	1 or tomoden	53.7	34.7	14	42.5	-35%	-2.83	0.0
Albany	Albany	1.4	1.1	14	1.6	-17%	2.03	0.0
New York	New York	52.3	33.6	14	40.9	-36%	-2.79	0.0
Rhode Island	NCW TOTK	3.9	5.2	14	4.8	36%	0.17	7.6
Newport	Newport	0.1	0.4	14	0.2	270%	0.03	0.7
Providence	Providence	3.7	4.8	14	4.6	270%	0.03	6.9
Atlantic - Middle	Providence	161.0	4.8 227.8	14 14	203.2	42%	8.37	341.3
				= -			8.37	341.3
Delaware	\A/:line in orb on	4.4	5.0	14	10.4	13%		
New Castle	Wilmington	4.4	5.0	14	10.4	13%		
District of Columbia	M/s slater stars	0.0	0.1	14	0.0	8234%		
District of Columbia	Washington	0.0	0.1	14	0.0	8234%	0.64	20.0
Maryland		25.0	34.3	14	28.7	37%	0.64	39.2
Anne Arundel	Annapolis	0.0	0.1	14	0.0	2468%		
Dorchester	Cambridge	0.0	0.1	14	0.0	58101%		
Somerset	Crisfield	0.0	0.2	14	0.0	1099%	0.01	0.2
Baltimore City	Baltimore	24.9	34.0	14	28.6	36%	0.62	38.9
New Jersey		7.7	67.0	14	46.6	772%	6.29	150.5
Camden	Camden	0.0	0.7	14	0.2	6198%	0.06	1.2
Camden	Gloucester City	0.0	0.0	14	0.0	-57%		
Essex	Newark	7.6	59.4	14	40.5	683%	5.64	133.5
Gloucester	Paulsboro	0.0	0.8	14	0.4	3617%	0.09	1.8
Middlesex	Perth Amboy	0.0	6.2	14	5.5	20557%		
Pennsylvania		60.8	54.4	14	65.3	-11%		
Delaware	Chester	6.7	11.9	14	10.3	79%	0.23	14.1
Philadelphia	Philadelphia	54.1	42.5	14	55.0	-22%		

Table 14. Summary of marine port shipments, weight basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county

		1997 (million	2010 (million	Obser-	Avg. Weight	1997- 2010 %	Slope of	Forecasi 2020
Region State County	Port	tons)	tons)	vations	(million tons)	Change	regression	(million tons
Virginia		63.1	67.0	14	52.1	6%		
Alexandria (city)	Alexandria	0.1	0.6	13	0.1	844%		
Hopewell (city)	Hopewell	0.1	18.9	14	1.4	19997%		
Newport News (city)	Newport News	15.7	47.4	14	15.1	201%		
Norfolk (city)	Norfolk Richmond-	46.4	0.1	14	34.8	-100%		
Richmond (city)	Petersburg	0.8	0.0	14	0.8	-100%		
Atlantic - South		71.8	116.7	14	99.5	63%	4.20	168.8
Florida		27.2	36.6	14	35.5	35%	0.92	50.6
Brevard	Port Canaveral	1.9	1.9	14	2.6	-2%		
Broward	Port Everglades	8.1	11.1	14	11.1	38%	0.36	17.1
Duval	Jacksonville	9.1	12.8	14	11.8	40%	0.35	17.6
Miami-Dade	Miami Fernandina	6.2	8.7	14	7.9	40%	0.17	10.7
Nassau	Beach West Palm	0.6	0.6	14	0.5	8%		
Palm Beach	Beach	1.3	1.5	14	1.5	17%		
St. Lucie	Fort Pierce	0.1	0.1	14	0.1	2%	0.01	0.2
Georgia		20.4	50.3	14	34.0	147%	2.77	79.8
Chatham	Savannah	17.8	47.9	14	31.8	169%	2.79	77.7
Glynn	Brunswick	2.6	2.4	14	2.3	-8%		
North Carolina		6.0	8.4	14	6.4	41%	0.20	9.8
Carteret	Beaufort	1.7	1.9	14	1.2	12%		
New Hanover	Wilmington	4.3	6.5	14	5.3	52%	0.22	8.9
South Carolina	······································	18.2	21.4	14	23.5	17%		
Charleston	Charleston	16.8	21.4	14	22.7	27%		
Georgetown	Georgetown	1.4	0.0	14	0.8	-98%	-0.11	0.0
Gulf of Mexico - East	220.8000	53.2	67.5	14	63.4	27%	1.52	88.4
Alabama		18.6	21.3	14	24.0	14%		
Mobile	Mobile	18.6	21.3	14	24.0	14%		
Florida	IVIODIIC	10.1	16.0	14	14.2	58%	0.52	22.7
Bay	Panama City	0.7	1.6	14	1.0	141%	0.08	2.3
Escambia	Pensacola	0.7	0.2	14	0.3	-28%	0.08	2.0
Hillsborough	_	7.8		14		60%	0.47	18.0
	Tampa Boca Grande	0.0	12.5 0.0	13	10.3 0.0	0076	0.47	10.0
Lee Manatee	Port Manatee			14	2.5	25%		
Monroe	Key West	1.4 0.0	1.8 0.0	14	2.5 0.0	260%		
	Saint							
Pinellas	Petersburg	0.0	0.0	14	0.0	-93%	0.53	22.
Mississippi	C 11 1	24.5	30.2	14	25.2	23%	0.52	33.7
Harrison	Gulfport	2.7	2.7	14	2.5	-1%	0.50	24.0
Jackson	Pascagoula	21.8	27.5	14	22.7	26%	0.52	31.3
Warren	Vicksburg	0.0	0.0	12.0	0.0			
Washington	Greenville	0.0	0.0	14.0	0.0	-0.2		
Gulf of Mexico - West		520.0	645.4	14	603.4	24%	8.33	740.9
Louisiana		241.0	271.3	14	267.5	13%		
Calcasieu	Lake Charles	28.1	33.6	14	32.4	19%	0.38	38.6
East Baton Rouge	Baton Rouge	36.9	21.2	14	29.3	-42%	-1.28	8.2
Jefferson	Avondale	0.0	0.0	14	0.0	462%		
Orleans	New Orleans	88.6	99.0	14	93.1	12%		
Plaquemines	Port Sulphur	0.0	0.3	14	0.1	2033%	0.02	0.4
St. Charles	Destrehan	0.0	0.0	13	0.0	3%		

Table 14. Summary of marine port shipments, weight basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county

		1997 (million	2010 (million	Obser-	Avg. Weight	1997- 2010 %	Slope of	Forecast 2020
Region State County	Port	tons)	tons)	vations	(million tons)	Change	regression	(million tons)
St. Charles	St. Rose	1.2	3.2	14	1.8	161%		
St. James	Good Hope	0.0	0.0	10	3.9	-100%		
St. James	Gramercy	52.9	64.4	14	54.3	22%		
St. Mary	Morgan City	33.1	49.4	14	52.7	49%	1.24	73.2
Texas		279.0	374.1	14	335.9	34%	6.67	446.0
Brazoria	Freeport	18.9	21.6	14	23.8	14%		
Calhoun	Port Lavaca	6.7	5.4	14	6.6	-19%		
Cameron	Brownsville	0.4	1.4	14	0.9	233%	0.09	2.4
Galveston	Galveston	31.6	9.1	14	25.1	-71%	-2.68	0.0
Galveston	Texas City	1.0	38.6	14	17.7	3760%	3.34	72.8
Harris	Houston	109.6	171.7	14	138.0	57%	5.06	221.4
Jefferson	Beaumont	24.9	29.5	14	32.9	18%		
Jefferson	Port Arthur	38.4	42.4	14	38.7	10%		
Jefferson	Sabine	0.0	0.4	14	0.1	80234%	0.02	0.3
Nueces	Corpus Christi	47.5	53.9	14	52.0	14%	0.37	58.2
Orange	Orange	0.0	0.0	14	0.0	1796%		
Pacific - Hawaii		8.0	8.5	14	8.5	6%	0.20	11.9
Hawaii		8.0	8.5	14	8.5	6%	0.20	11.9
Hawaii	Hawaii County	0.0	0.0	1	0.0			
Hawaii	Hilo	0.1	0.0	14	0.1	-61%	-0.01	0.0
Hawaii	Kona	0.0	0.0	13	0.0			
Honolulu	Honolulu Nawiliwili-	7.9	8.3	14	8.4	5%	0.20	11.7
Kauai	Port Allen	0.0	0.0	13	0.0			
Maui	Kahului	0.0	0.1	14	0.1	325%	0.01	0.2
Pacific - California		110.3	216.5	14	173.7	96%	8.84	319.5
California		110.3	216.5	14	173.7	96%	8.84	319.5
Alameda	Alameda	0.0	0.0	14	0.0	-85%		
Alameda	Oakland	13.2	24.1	14	21.5	83%	0.74	33.8
Contra Costa	Crockett	0.5	0.5	14	1.1	-7%		
Contra Costa	Martinez	2.1	5.9	14	2.7	177%	0.17	5.6
Contra Costa	Richmond	5.4	13.5	14	8.1	148%	0.97	24.0
Contra Costa	Selby	0.1	0.0	14	0.2	-33%		
Humboldt	Eureka	0.6	0.1	14	0.3	-88%	-0.05	0.0
Los Angeles	El Segundo	3.4	12.1	14	10.2	251%	0.58	19.7
Los Angeles	Long Beach	25.0	60.7	14	41.9	142%	2.87	89.2
Los Angeles	Los Angeles	50.9	85.4	14	73.5	68%	3.07	124.1
Los Angeles	Segundo	0.0	0.4	14	0.1	3216%	0.02	0.4
Marin	San Pablo Bay	0.1	0.8	14	0.6	924%		
Mariposa	El Capitan	0.0	0.0	10	0.0	-100%		
Monterey	Monterey	0.0	0.0	14	0.0	-89%	0.00	0.0
Sacramento	Sacramento	1.0	0.3	14	0.8	-72%	-0.04	0.1
San Diego	San Diego	0.8	1.0	14	2.1	30%	0.01	3.1
San Francisco	San Francisco San Juaquin	1.8	4.5	14	3.4	151%	0.41	10.2
San Joaquin	River	0.4	0.0	14	0.3	-100%	-0.06	0.0
San Joaquin	Stockton	2.6	2.2	14	3.2	-15%		
San Luis Obispo	Avila Beach	0.0	0.0	14	0.0	-78%		
San Luis Obispo	Morro Bay	0.0	0.0	14	0.0	874%		
San Mateo	Redwood City Carquinez	0.4	0.4	14	0.9	12%		
Solano	Strait	0.8	3.3	14	1.6	294%	0.18	4.6

Table 14. Summary of marine port shipments, weight basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county

		1997 (million	2010 (million	Obser-	Avg. Weight	1997- 2010 %	Slope of	Forecast 2020
Region State County	Port	tons)	(million tons)	vations	(million tons)	Change	•	(million tons)
Solano	Suisun Bay Port	0.4	0.0	14	0.1	-100%	-0.03	0.0
Ventura	Hueneme	0.7	1.4	14	1.2	82%	0.04	1.8
Ventura	Ventura	0.0	0.0	13	0.0	1317%		
Pacific - Northwest		82.7	103.5	14	87.2	25%	2.58	129.7
Oregon		23.6	21.3	14	19.9	-10%		
Clatsop	Astoria	0.2	0.0	14	0.0	-96%	-0.01	0.0
Coos	Coos Bay	2.8	1.7	14	1.8	-37%	-0.08	0.5
Lincoln	Newport	0.1	0.0	14	0.0	-88%		
Multnomah	Portland	20.6	19.5	14	18.1	-5%		
Washington		59.0	82.3	14	67.3	39%	2.71	112.0
Clallam	Neah Bay	0.0	0.0	10	0.0	-100%		
Clallam	Port Angeles	0.9	0.2	14	0.3	-75%	-0.05	0.0
Clark	Vancouver	4.5	6.1	14	5.0	34%	0.15	7.4
Cowlitz	Kalama	1.2	11.4	14	7.2	821%	0.68	18.4
Cowlitz	Longview	8.6	5.2	14	4.7	-40%		
Grays Harbor	Aberdeen	1.3	1.5	14	0.9	12%		
Jefferson	Port Townsend	0.0	0.0	14	0.0	1211%		
King	Seattle	22.4	29.0	14	22.7	29%	0.75	35.1
Pierce	Tacoma	15.5	21.2	14	19.2	37%	0.94	34.8
San Juan	Friday Harbor	0.1	0.0	14	0.0	-100%	0.00	0.0
Skagit	Anacortes	1.1	2.0	14	2.4	77%		
Snohomish	Everett	1.1	0.2	14	0.5	-83%	-0.04	0.0
Thurston	Olympia	0.1	0.6	14	0.2	327%	0.03	0.6
Whatcom	Bellingham	1.5	4.5	14	3.6	208%	0.34	9.3
Whatcom	Blaine	0.5	0.5	14	0.5	-10%		
Whatcom	Point Roberts	0.0	0.0	14	0.0	271%		
Pacific - Alaska		11.2	6.4	14	7.6	-43%	-0.37	1.5
Alaska		11.2	6.4	14	7.6	-43%	-0.37	1.5
Aleutians East	Sand Point	0.0	0.0	1	0.0			
Anchorage Fairbanks North	Anchorage	5.7	5.5	14	5.6	-3%		
Star	Fairbanks	0.0	0.0	13	0.0	-100%	0.00	0.0
Haines	Dalton Cache	0.0	0.0	14	0.0	41%		
Juneau	Juneau	0.3	0.2	14	0.3	-27%	-0.01	0.1
Ketchikan Gateway	Ketchikan	1.3	0.6	14	0.7	-54%	-0.05	0.0
Kodiak Island	Kodiak	0.0	0.0	14	0.0	-92%	0.00	0.0
Sitka	Sitka	0.0	0.0	14	0.0	13%		
Skagway	Skagway	0.2	0.0	14	0.1	-89%	-0.01	0.0
Wrangell	Wrangell	0.0	0.0	13	0.0	-19%	0.00	0.0
Hoonah-Angoon	Pelican	0.0	0.0	5	0.0			
Petersburg	Petersburg	0.0	0.0	11	0.0			
Valdez-Cordova	Valdez	3.6	0.0	14	0.9	-100%	-0.28	0.0
Great Lakes - West		26.6	21.6	14	27.6	-19%		
Illinois		6.2	3.1	14	4.9	-50%	-0.18	1.8
Cook	Chicago	6.2	3.1	14	4.9	-50%	-0.18	1.9
Peoria	Peoria	0.0	0.0	14	0.0	-88%		
Indiana		0.3	0.1	14	0.3	-68%		
Lake	East Chicago	0.1	0.0	8	0.0	-100%	-0.01	0.0
Lake	Gary	0.2	0.1	14	0.2	-59%		
Michigan		8.8	13.1	14	12.9	49%	0.91	27.9
Alpena	Alpena	0.1	0.2	14	0.2	13%		

Table 14. Summary of marine port shipments, weight basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county

		1997 (million	2010 (million	Obser-	Avg. Weight	1997- 2010 %	Slope of	Forecas 202
Region State County	Port	tons)	` tons)	vations	(million tons)	Change	regression	(million tons
Calhoun	Battle Creek	0.0	0.1	12	0.1	128191%		
Chippewa	De Tour Village	0.0	0.0	14	0.0	269%		
Chippewa	Sault Ste. Marie	1.0	0.9	14	0.9	-11%		
Delta	Escanaba	0.0	0.1	13	0.1	22546%	0.01	0.2
Mackinac	Mackinac Island	0.0	0.0	7	0.0	461%		
Marquette	Marquette	1.1	2.2	14	2.2	97%		
Muskegon	Muskegon	0.5	0.0	14	0.4	-100%	-0.04	0.0
Ottawa	Ferrysburg	0.1	0.0	12	0.1	-100%	-0.02	0.0
Ottawa	Grand Haven	0.0	0.0	12	0.1	-100%		
Presque Isle	Presque Isle	0.0	0.0	10	0.0	7797%		
Presque Isle	Rogers City Saginaw/Bay	0.5	0.1	14	0.3	-77%	-0.02	0.
Saginaw	City	1.2	0.4	14	0.9	-68%	-0.07	0.
St. Clair	Algonac	0.0	0.0	10	0.0			
St. Clair	Port Huron	4.2	9.2	14	7.8	118%	1.00	24.
Minnesota		5.4	0.8	14	2.8	-86%	-0.45	0.
Cook	Grand Portage International	0.0	0.0	10	0.0	-95%	0.00	0.
Koochiching	Falls	0.0	0.4	14	0.1	730%	0.03	0.
Lake	Silver Bay	0.6	0.4	13	0.2	-33%		
Lake of the Woods	Baudette	0.0	0.0	12	0.0			
Roseau	Warroad	0.0	0.0	14	0.0	796%		
St. Louis	Duluth	4.8	0.0	9	2.5	-100%	-0.50	0.
Wisconsin		5.9	4.5	14	6.8	-24%		
Ashland	Ashland	0.0	0.0	13	0.0	-98%		
Door	Green Bay	0.4	0.3	14	0.4	-14%		
Douglas	Superior	3.9	3.2	14	4.8	-16%		
Manitowoc	Manitowoc	0.0	0.0	8	0.0	-100%		
Marinette	Marinette	0.1	0.1	14	0.3	-37%		
Milwaukee	Milwaukee	1.5	0.8	14	1.3	-46%		
Racine	Racine	0.0	0.0	14	0.0	896%		
Sheboygan	Sheboygan	0.0	0.0	7	0.0			
ireat Lakes - East		28.8	22.2	14	28.1	-23%	-0.81	14.
Michigan		7.2	4.3	14	5.9	-40%	-0.20	2.
Wayne	Detroit	7.2	4.3	14	5.9	-40%	-0.20	2.
New York		5.3	6.5	14	6.6	22%		
Jefferson	Alexandria Bay	0.3	0.1	14	0.1	-70%	-0.01	0.
Jefferson	Cape Vincent	0.0	0.0	7	0.0			
Jefferson	Clayton	0.0	0.0	9	0.0	766500%		
Monroe	Rochester	0.2	0.1	14	0.1	-42%	0.00	0.
Niagara	Niagara Falls	4.7	5.8	14	5.8	23%		
Oswego	Oswego	0.0	0.4	14	0.3	14056%	0.04	0.
St. Lawrence	Ogdensburg	0.1	0.1	14	0.2	4%		
Wayne	Sodus Point	0.0	0.0	8	0.0	4148%		
Ohio		16.2	11.3	14	15.5	-30%	-0.58	6.
Ashtabula	Ashtabula Ashtabula/Conn	4.7	0.0	10	2.7	-100%	-0.52	0.
Ashtabula	eaut	0.0	1.8	5	0.5		0.14	2.
Ashtabula	Conneaut	0.1	0.0	9	0.7	-100%		
Cuyahoga	Cleveland	4.1	1.7	14	3.0	-58%	-0.15	0.
Erie	Huron	0.0	0.0	14	0.0	100%		0.
Lake	Fairport	0.4	0.0	10	0.1	-100%	-0.02	0.

Table 14. Summary of marine port shipments, weight basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county

Region State County	Port	1997 (million tons)	2010 (million tons)	Obser- vations	Avg. Weight (million tons)	1997- 2010 % Change	Slope of regression	Forecast 2020 (million tons)
Lorain	Lorain	0.1	0.1	13	0.0	-14%		
Lucas	Toledo	6.9	7.8	14	8.4	13%		
Pennsylvania		0.1	0.1	14	0.1	-15%		
Erie	Erie	0.1	0.1	14	0.1	-15%		
Grand Total		1,160.1	1,507.5	14	1,385.1	30%	30.82	1893.7

Note: slope and forecasts were based on a linear Ordinary Least Squares regression over time (year). Slope coefficients and forecasted values for 2020 were only shown when the regressions yielded a statistically significant slope coefficient and the forecasted value was zero or greater.

Table 15. Summary of marine port shipments, value basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county (in Billion 2010 Dollars)

Region, State, County	Port	Value 1997 (Billion \$)	Value 2010 (Billion \$)	Number Obser- vations	Avg. Value (Billion \$)	1997- 2010 % Change	Avg. Annual Change (Billion \$)	Forecast 2020 (Billion \$)
	roit						(Billion 3)	(Billion 3)
Atlantic - North		90.5	106.1	14	90.4	17%	0.07	2.0
Connecticut	D.I.	1.0	1.6	14	1.7	56%	0.07	2.9
Fairfield	Bridgeport	0.2	0.1	14	0.2	-72%	-0.01	0.0
Hartford	Hartford	0.0	0.0	14	0.0	-11%	0.07	• •
New Haven	New Haven	0.8	1.5	14	1.4	92%	0.07	2.6
New London	New London	0.0	0.0	14	0.2	2065%	0.46	
Maine	B 1	1.6	2.6	14	2.2	65%	0.16	4.7
Cumberland	Portland	1.1	1.6	14	1.5	45%	0.09	3.0
Hancock	Bar Harbor	0.0	0.0	14	0.0	-45%		
Knox	Rockland	0.0	0.0	8	0.0	42020/		
Penobscot	Bangor	0.0	0.0	14	0.0	1292%		
Sagadahoc	Bath	0.0	0.4	9	0.0	6404		
Waldo	Belfast	0.2	0.1	14	0.1	-61%		
Waldo	Searsport	0.2	0.7	14	0.4	184%	0.05	1.1
Washington	Eastport	0.1	0.3	14	0.2	154%	0.01	0.4
Washington	Jonesport		0.0	8	0.0		0.00	0.0
Massachusetts		7.0	10.5	14	9.3	50%	0.38	15.5
Barnstable	Provincetown		0.0	12	0.0			
Bristol	Fall River	0.1	0.0	14	0.1	-46%	0.01	0.2
Bristol	New Bedford	0.0	0.0	14	0.0	-38%		
Essex	Gloucester	0.0	0.0	14	0.0	-29%	0.00	0.0
Essex	Salem	0.0	0.1	14	0.1	26%		
Plymouth	Plymouth	0.1		13	0.1			
Suffolk	Boston	6.7	10.3	14	9.0	54%	0.38	15.3
New Hampshire		0.6	2.5	14	1.6	291%	0.14	4.0
Rockingham	Portsmouth	0.6	2.5	14	1.6	291%	0.14	4.0
New York		79.0	83.1	14	72.6	5%		
Albany	Albany	0.4	0.8	14	0.5	89%	0.04	1.1
New York	New York	78.6	82.3	14	72.1	5%		
Rhode Island		1.3	5.8	14	3.0	356%	0.42	10.0
Newport	Newport	0.0	0.1	14	0.1	107%	0.01	0.2
Providence	Providence	1.2	5.7	14	3.0	362%	0.42	9.8
Atlantic - Middle		135.1	302.5	14	227.2	124%	19.28	545.3
Delaware		3.0	3.5	14	5.9	18%		
New Castle	Wilmington	3.0	3.5	14	5.9	18%		
District of Columbia		0.0	0.0	14	0.0	123%		
District of Columbia	Washington	0.0	0.0	14	0.0	123%		
Maryland		29.7	45.5	14	36.6	53%	1.58	62.7
Anne Arundel	Annapolis	0.0	0.0	14	0.0	105%		
Dorchester	Cambridge	0.0	0.0	14	0.0	2115%		
Somerset	Crisfield	0.0	0.2	14	0.0	322%		
Baltimore City	Baltimore	29.7	45.3	14	36.5	53%	1.57	62.5
New Jersey		27.1	126.0	14	80.7	364%	10.38	251.9
Camden	Camden	0.2	0.3	14	0.2	86%	0.03	0.7
Camden	Gloucester City	0.1	0.0	14	0.1	-77%		
Essex	Newark	26.8	121.4	14	77.9	353%	9.96	242.2
Gloucester	Paulsboro	0.0	0.4	14	0.2	4680%	0.05	0.9
Middlesex	Perth Amboy	0.1	3.8	14	2.3	5735%	0.35	8.0
Pennsylvania		19.8	38.9	14	31.3	97%	2.48	72.2
Delaware	Chester	3.6	10.7	14	6.9	196%	0.71	18.6
Philadelphia	Philadelphia	16.2	28.2	14	24.4	74%	1.77	53.6
Virginia	-	55.5	88.5	14	72.8	59%	4.60	148.8
Alexandria (city)	Alexandria	0.0	0.1	14	0.0	117%		
Hopewell (city)	Hopewell	0.1	2.3	14	0.2	1661%		
Newport News (city)	Newport News	4.3	85.8	14	10.4	1908%		
Norfolk (city)	Norfolk	46.2	0.3	14	59.3	-99%		
Richmond (city)	Richmond-	4.9	0.0	14	2.9	-100%		

Table 15. Summary of marine port shipments, value basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county (in Billion 2010 Dollars)

Region, State, County	Port	Value 1997 (Billion \$)	Value 2010 (Billion \$)	Number Obser- vations	Avg. Value (Billion \$)	1997- 2010 % Change	Avg. Annual Change (Billion \$)	Forecast 2020 (Billion \$)
Region, State, County	Petersburg	(ב ווטווום)	(¢ iiiiid)	Vations	(¢ HUIIIId)	Change	(EIIIIIII)	(Cillion 2)
Atlantic - South	retersburg	148.5	239.2	14	184.0	61%	8.41	322.8
Florida		63.0	79.7	14	69.6	26%	1.69	97.4
Brevard	Port Canaveral	0.6	0.8	14	0.7	28%	2.00	57
Broward	Port Everglades	16.5	25.8	14	19.8	57%	0.90	34.7
Duval	Jacksonville	15.5	21.5	14	18.3	39%	0.67	29.3
Miami-Dade	Miami	27.1	28.0	14	27.3	4%	0.07	23.3
	Fernandina					1,70		
Nassau	Beach	0.7	0.7	14	0.6	8%		
Palm Beach	W. Palm Beach	2.7	2.8	14	2.9	2%		
St. Lucie	Fort Pierce	0.0	0.1	14	0.1	509%	0.01	0.2
Georgia		29.6	87.7	14	49.1	196%	4.82	128.6
Chatham	Savannah	25.4	76.5	14	42.7	201%	4.46	116.3
Glynn	Brunswick	4.2	11.2	14	6.3	167%	0.36	12.2
North Carolina	2	8.4	10.7	14	6.3	27%	0.00	
Carteret	Beaufort	1.2	0.9	14	0.9	-26%		
New Hanover	Wilmington	7.2	9.8	14	5.4	36%		
South Carolina	Willington	47.4	61.0	14	59.0	29%	1.78	88.3
Charleston	Charleston	47.2	61.0	14	58.9	29%	1.78	88.4
Georgetown	Georgetown	0.1	0.0	14	0.1	-98%	-0.01	0.0
Gulf of Mexico - East	Georgetown	14.7	33.0	14	23.1	124%	1.83	53.3
Alabama		4.3	10.2	14	6.6	136%	0.58	16.2
Mobile	Mobile	4.3	10.2	14	6.6	136%	0.58	16.2
Florida	WIODIIC	4.5	7.9	14	6.5	77%	0.50	14.7
Bay	Panama City	0.5	3.2	14	1.8	606%	0.32	7.0
Escambia	Pensacola	0.1	0.1	14	0.1	-48%	0.32	7.0
Hillsborough	Tampa	3.5	4.0	14	3.9	15%		
Lee	Boca Grande	3.3	0.0	13	0.0	1376		
Manatee	Port Manatee	0.4	0.6	14	0.6	51%	0.04	1.2
Monroe	Key West	0.0	0.0	14	0.0	442%	0.04	1.2
Pinellas	Saint Petersburg	0.0	0.0	14	0.0	-43%		
	Janit retersburg	5.9	14.8	14	10.0	152%	0.75	22.4
Mississippi Harrison	Gulfport	2.3	3.3	14	3.9	41%	0.75	22.4
Jackson	Pascagoula	3.5	11.5	14	6.2	225%	0.75	18.5
Warren	Vicksburg	3.5	0.0	12.0	0.0	22370	0.75	16.5
	Greenville	0.0	0.0	14.0	0.0	-0.7		
Washington	Greenville		368.0		238.0		21.25	588.6
Gulf of Mexico - West Louisiana		148.8 59.4	118.2	14 14	238.0 80.6	147% 99%	21.25 5.98	179.2
Calcasieu	Lake Charles	4.8	14.2	14	8.3	195%	0.86	22.6
		4.8 7.6	9.6	14	8.3 7.7	27%		13.6
East Baton Rouge	Baton Rouge	0.0	0.0	14	0.0		0.36	15.0
Jefferson Orleans	Avondale New Orleans		46.4	14		-46%	1 50	60.3
		32.1			34.6	44%	1.56	
Plaquemines	Port Sulphur	0.0	0.1	14	0.0	456%	0.01	0.1
St. Charles	Destrehan	0.0	0.0	13	0.0	71%	0.00	1 -
St. Charles	St. Rose	0.2	1.4	14	0.5	604%	0.06	1.5
St. James	Good Hope	0.0	24.6	10	1.2	4200/	4 00	20.0
St. James	Gramercy	9.5	21.6	14	11.8	128%	1.09	29.8
St. Mary	Morgan City	5.2	25.0	14	16.7	381%	2.06	50.7
Texas	Form	89.4	249.8	14	157.4	179%	15.28	409.4
Brazoria	Freeport	3.8	10.6	14	7.9	177%	0.76	20.4
Calhoun	Port Lavaca	0.5	1.0	14	0.9	77%	0.06	1.8
Cameron	Brownsville	0.1	0.8	14	0.4	493%	0.06	1.5
Galveston	Galveston	5.4	5.8	14	6.4	8%		
Galveston	Texas City	0.6	19.3	14	8.0	3325%	1.69	35.9
Harris	Houston	61.2	153.7	14	97.5	151%	8.88	244.0
Jefferson	Beaumont	4.1	14.3	14	10.3	245%	0.96	26.1
Jefferson	Port Arthur	6.4	19.2	14	11.2	199%	1.19	30.8

Table 15. Summary of marine port shipments, value basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county (in Billion 2010 Dollars)

Region, State, County Jefferson	Port	1997 (Billion \$)	Value 2010 (Billion \$)	Number Obser- vations	Avg. Value (Billion \$)	1997- 2010 % Change	Annual Change (Billion \$)	Forecast 2020 (Billion \$)
letterson								
	Sabine	0.0	0.1	14	0.0	1446%	0.00	0.1
Nueces	Corpus Christi	7.2	25.0	14	14.9	249%	1.67	42.4
Orange	Orange	0.0	0.0	14	0.0	19512%	0.00	0.1
Pacific - Hawaii		1.9	4.3	14	3.3	121%	0.30	8.2
Hawaii		1.9	4.3	14	3.3	121%	0.30	8.2
Hawaii	Hawaii County		0.0	1	0.0			
Hawaii	Hilo	0.0	0.0	14	0.0	182%		
Hawaii	Kona		0.0	13	0.0			
Honolulu	Honolulu Nawiliwili-Port	1.9	4.3	14	3.2	120%	0.30	8.2
Kauai	Allen		0.0	13	0.0			
Maui	Kahului	0.0	0.0	14	0.0	813%	0.00	0.0
Pacific - California		299.4	460.6	14	374.6	54%	14.07	606.7
California		299.4	460.6	14	374.6	54%	14.07	606.7
Alameda	Alameda	0.0	0.0	14	0.0	-57%		
Alameda	Oakland	43.5	52.3	14	44.0	20%		
Contra Costa	Crockett	0.2	0.3	14	0.3	32%		
Contra Costa	Martinez	0.5	2.9	14	0.9	527%	0.14	3.2
Contra Costa	Richmond	1.3	7.6	14	3.8	462%	0.70	15.3
Contra Costa	Selby	0.0	0.0	14	0.1	73%	0.70	13.3
Humboldt	Eureka	0.0	0.0	14	0.1	-88%	-0.01	0.0
Los Angeles	El Segundo	0.6	5.8	14	3.3	863%	0.48	11.2
Los Angeles	Long Beach	92.4	112.7	14	95.7	22%	1.60	122.0
Los Angeles	Los Angeles	150.4	262.5	14	210.4	75%	10.02	375.8
_	_					6108%	0.01	
Los Angeles	Segundo	0.0	0.1	14	0.0		0.01	0.2
Marin	San Pablo Bay	0.1	0.3	14	0.2	421%		
Mariposa	El Capitan	0.0	0.0	10	0.0	20/		
Monterey	Monterey	0.0	0.0	14	0.0	-2%		
Sacramento	Sacramento	0.2	0.2	14	0.2	-35%		
San Diego	San Diego	2.9	4.7	14	5.5	59%		
San Francisco	San Francisco San Juaquin	1.3	3.4	14	2.4	172%	0.30	7.3
San Joaquin	River	0.0	0.0	14	0.0	-98%	0.00	0.0
San Joaquin	Stockton	0.5	0.8	14	0.7	53%	0.03	1.3
San Luis Obispo	Avila Beach	0.0	0.0	14	0.0	-69%		
San Luis Obispo	Morro Bay	0.0	0.0	14	0.0	732%		
San Mateo	Redwood City	0.0	0.0	14	0.0	-82%		
Solano	Carquinez Strait	1.2	1.6	14	1.1	30%		
Solano	Suisun Bay	0.1	0.0	14	0.0	-96%	0.00	0.0
Ventura	Port Hueneme	4.0	5.4	14	5.7	37%		
Ventura	Ventura	0.0	0.0	13	0.0	1995%		
Pacific - Northwest		104.8	108.7	14	100.5	4%	1.55	126.0
Oregon		16.6	12.7	14	14.9	-24%		
Clatsop	Astoria	0.0	0.0	14	0.0	-76%	0.00	0.0
Coos	Coos Bay	0.4	0.1	14	0.2	-71%	-0.01	0.0
Lincoln	Newport	0.0	0.0	14	0.0	-88%		
Multnomah	Portland	16.2	12.6	14	14.8	-22%		
Washington		88.2	96.0	14	85.6	9%	1.56	111.3
Clallam	Neah Bay	0.0	3.5.3	10	0.0			
Clallam	Port Angeles	0.2	0.0	14	0.1	-79%	-0.01	0.0
Clark	Vancouver	1.4	3.3	14	2.4	135%	0.16	5.0
Cowlitz	Kalama	0.2	3.7	14	1.7	1495%	0.10	6.1
Cowlitz	Longview	2.0	1.2	14	1.7	-37%	0.27	0.1
Grays Harbor	Aberdeen	0.3	1.0	14	0.3	211%	0.03	0.8
							0.03	0.8
Jefferson	Port Townsend	0.0 E2 E	0.4	14	0.1 45.1	45893% %		
King Pierce	Seattle Tacoma	53.5 29.2	49.3 31.3	14 14	45.1 31.4	-8% 7%	0.86	45.5

Table 15. Summary of marine port shipments, value basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county (in Billion 2010 Dollars)

Region, State, County	Port	Value 1997 (Billion \$)	Value 2010 (Billion \$)	Number Obser- vations	Avg. Value (Billion \$)	1997- 2010 % Change	Avg. Annual Change (Billion \$)	Forecast 2020 (Billion \$)
San Juan	Friday Harbor	0.0	0.0	14	0.0	-87%	0.00	0.0
Skagit	Anacortes	0.0	0.0	14	0.7	430%	0.08	2.0
Snohomish	Everett	0.2	2.1	14	0.7	865%	0.08	4.0
						-25%	0.19	4.0
Thurston	Olympia	0.1	0.1	14	0.1		0.24	4.0
Whatcom	Bellingham	0.5	2.3	14	1.4	403%	0.21	4.9
Whatcom	Blaine	0.3	0.4	14	0.4	41%		
Whatcom	Point Roberts	0.0	0.0	14	0.0	298%		
Pacific - Alaska		4.1	5.0	14	4.0	24%	0.12	5.9
Alaska		4.1	5.0	14	4.0	24%	0.12	5.9
Aleutians East	Sand Point			1	0.0			
Anchorage	Anchorage	2.9	4.5	14	3.5	57%	0.16	6.1
Fairbanks North Star	Fairbanks	0.0		13	0.0			
Haines	Dalton Cache	0.0	0.0	14	0.0	383%		
Juneau	Juneau	0.1	0.3	14	0.1	135%		
Ketchikan Gateway	Ketchikan	0.4	0.2	14	0.2	-50%		
Kodiak Island	Kodiak	0.0	0.0	14	0.0	-93%	0.00	0.0
Sitka	Sitka	0.0	0.0	14	0.0	-43%		
Skagway	Skagway	0.0	0.0	14	0.0	-68%		
Wrangell	Wrangell	0.0	0.0	13	0.0	307%		
Hoonah-Angoon	Pelican	0.0	0.0	6	0.0	30770	0.00	0.0
•			0.0	11			0.00	0.0
Petersburg	Petersburg	0.6			0.0	1000/	0.04	0.0
Valdez-Cordova	Valdez	0.6	0.0	14	0.2	-100%	-0.04	0.0
Great Lakes - West		5.2	5.5	14	5.3	6%		
Illinois		2.2	1.3	14	2.3	-42%	-0.12	0.4
Cook	Chicago	2.2	1.3	14	2.3	-42%	-0.11	0.4
Peoria	Peoria	0.0	0.0	14	0.0	-95%		
Indiana		0.0	0.0	14	0.0	-27%		
Lake	East Chicago	0.0		8	0.0			
Lake	Gary	0.0	0.0	14	0.0	-9%		
Michigan		1.6	2.0	14	1.5	29%	0.08	2.9
Alpena	Alpena	0.0	0.0	14	0.0	64%	0.00	0.0
Calhoun	Battle Creek	0.0	0.0	12	0.0	19204%	0.00	0.0
Chippewa	De Tour Village	0.0	0.0	14	0.0	356%	0.00	0.0
Chippewa	Sault Ste. Marie	0.3	0.1	14	0.1	-58%	-0.01	0.0
Delta	Escanaba	0.0	0.0	13	0.0	3006%		
Mackinac	Mackinac Island	0.0	0.0	7	0.0	121%		
Marquette	Marquette	0.1	0.2	14	0.1	279%	0.01	0.3
Muskegon	Muskegon	0.0	0.0	14	0.0	-99%	5.52	5.5
Ottawa	Ferrysburg	0.0	0.0	12	0.0	-99%	0.00	0.0
Ottawa	Grand Haven	0.0	0.0	12	0.0	-5570	0.00	0.0
		0.0	0.0	10		6319/	0.00	0.0
Presque Isle	Presque Isle				0.0	621%	0.00	0.0
Presque Isle	Rogers City Saginaw/Bay	0.0	0.0	14	0.0	31%		
Saginaw	City	0.0	0.0	14	0.0	-11%		
St. Clair	Algonac			10	0.0			
St. Clair	Port Huron	1.2	1.6	14	1.2	38%	0.08	2.5
Minnesota		0.6	1.0	14	0.5	87%		
Cook	Grand Portage International	0.0	0.0	10	0.0	75%		
Koochiching	Falls	0.0	1.0	14	0.2	7998%	0.06	1.2
Lake	Silver Bay	0.0	0.0	13	0.0	107%	0.00	0.1
Lake of the Woods	Baudette	5.5	0.0	12	0.0	,	2.00	
Roseau	Warroad	0.0	0.0	14	0.0	1270%		
St. Louis	Duluth	0.5	0.0	9	0.0	12/0/0	-0.04	0.0
	Dulutii		4 4			370/	-0.04	0.0
Wisconsin	A alala sa al	0.8	1.1	14	0.9	37%		
Ashland	Ashland	0.0	0.0	13	0.0	-98%		
Door	Green Bay	0.0	0.1	14	0.1	455%	0.01	0.2

Table 15. Summary of marine port shipments, value basis, 1997 and 2010, and forecast for 2020, by U.S. coastal region, state and county (in Billion 2010 Dollars)

							Avg.	
		Value	Value	Number	Avg.	1997-	Annual	Forecast
Region, State, County	Port	1997 (Billion \$)	2010 (Billion \$)	Obser- vations	Value (Billion \$)	2010 % Change	Change (Billion \$)	2020 (Billion \$)
		0.5	0.8	14	0.6	45%	(Billion 3)	(چ انانانانا)
Douglas Manitowoc	Superior Manitowoc	0.0	0.8	8	0.0	45%		
			0.0			F0/		
Marinette	Marinette	0.0	0.0	14	0.1	-5%		
Milwaukee	Milwaukee	0.2	0.2	14	0.2	-29%		
Racine	Racine	0.0	0.0	14	0.0	317%		
Sheboygan	Sheboygan		0.0	8	0.0			
Great Lakes - East		8.4	6.8	14	8.6	-20%		
Michigan		5.6	3.9	14	5.9	-30%		
Wayne	Detroit	5.6	3.9	14	5.9	-30%		
New York		1.0	1.1	14	1.0	8%		
Jefferson	Alexandria Bay	0.1	0.1	14	0.1	-21%		
Jefferson	Cape Vincent		0.0	7	0.0			
Jefferson	Clayton	0.0	0.0	9	0.0	38321%		
Monroe	Rochester	0.0	0.0	14	0.1	99%		
Niagara	Niagara Falls	0.9	0.8	14	0.7	-5%		
Oswego	Oswego	0.0	0.1	14	0.1	1702%	0.01	0.3
St. Lawrence	Ogdensburg	0.0	0.0	14	0.0	-67%		
Wayne	Sodus Point	0.0	0.0	8	0.0	1724%		
Ohio		1.8	1.8	14	1.6	0%		
Ashtabula	Ashtabula	0.3		10	0.2		-0.02	0.0
	Ashtabula/Conn							
Ashtabula	eaut		0.2	5	0.2			
Ashtabula	Conneaut	0.0		9	0.0			
Cuyahoga	Cleveland	0.6	0.5	14	0.5	-22%		
Erie	Huron	0.0	0.0	14	0.0	2253%		
Lake	Fairport	0.0	0.0	10	0.0	223370		
Lorain	Lorain	0.0	0.0	13	0.0	50%		
Lucas	Toledo	0.9	1.1	14	0.8	20%	0.04	1.5
Pennsylvania	Tolcuo	0.3	0.0	14	0.0	- 57%	0.04	1.5
Erie	Erie	0.1	0.0	14	0.0	-57% -57%		
	LITE							• • • • • •
Grand Total		961.4	1,639.6	14	1,259.0	71%	67.00	2,364.4

Note: slope and forecasts were based on a linear Ordinary Least Squares regression over time. Slope coefficients and forecasted values for 2020 were only shown when the regressions yielded a statistically significant slope coefficient and forecasted values that were greater than or equal to zero.

Trends in Commercial Fisheries

Tables 16 and 17 provide data on landed weight and value, respectively, for U.S. commercial fisheries during the period 1990 to 2010. The total landed weight of fish caught in the United States in 2010 was more than 4.5 billion pounds. This represented a 17 percent decrease since 1990 (5.4 billion lbs.). The total landed value in 2010 exceeded \$2.70 billion, which was 18 percent less than the total value for 1990 (\$3.3 billion) in inflation adjusted dollars. The Pacific-Alaska region had the highest landed weight of 1.76 billion pounds in 2010 followed by the Gulf of Mexico-West (769 M lbs.), Atlantic-Middle (556 M lbs.), Pacific-California (414 M lbs.), Atlantic-North (392 M lbs.), and Pacific-Northwest (368 M lbs.) (Table 16). The region with the highest landed value from fishing in 2010 was Pacific-Alaska with \$907 million, followed by Atlantic-North (\$563 M), Pacific-Northwest (\$276 M), Atlantic-Middle (\$269 M), Gulf of Mexico-West (\$249 M), Gulf of Mexico-East (\$150 M), and Pacific-California (\$140 M). It is notable that in 2010 Alaska had both the greatest landed weight and value of any state or region in the U.S. States with more than 100 million pounds landed weight fishing in 2010 included Louisiana (747 M lbs.), Virginia (445 M lbs.), California (414 M lbs.), Massachusetts (248 M lbs.), Oregon (196 M lbs.), Washington (172 M lbs.), and Mississippi (111 M lbs.). In addition to Alaska, the states with more than \$100 million in landed-value from fishing in 2010 included Massachusetts (\$398 M), Louisiana (\$196 M), Washington (\$180), New Jersey (\$147 M), California (\$140 M), Virginia (\$113 M), and Florida (\$108 M, for both south Atlantic and eastern Gulf of Mexico regions).

There were sixteen counties or census areas in the United States in 2010 that had more than 100 million pounds of landed weight fishing. The Aleutians West census Area in Alaska accounted for the highest landed weight of 515 million pounds, followed by Northumberland, Virginia (426 M lbs.), Kodiak Island, Alaska (325 M lbs.), Aleutians East, Alaska (302 M lbs.), Plaquemines, Louisiana (281 M lbs.), Vermilion, Louisiana (260 M lbs.), Los Angeles, California (186 M lbs.), Cameron, Louisiana (150 M lbs.), Valdez-Cordova, Alaska (147 M lbs.), Bristol, Massachusetts (133 M lbs.), Ventura, California (131 M lbs.), Bristol Bay, Alaska (124 M lbs.), Kenai Peninsula, Alaska (115 M lbs.), Jackson, Mississippi (105 M lbs.), Clatsop, Oregon (100 M lbs.), and Grays Harbor, Washington (100 M lbs.) (Table 16). Among individual counties, Bristol County in Massachusetts had the highest landed value of fish at \$306 million in 2010, followed by Aleutians West, Alaska (\$163 M), Kenai Peninsula, Alaska (\$150 M), Kodiak Island, Alaska (\$128 M), Bristol Bay, Alaska (\$101 M), Valdez-Cordova, Alaska (\$84 M), and Cape May, New Jersey (\$81 M).

Overall trends in fishery landings between 1990 and 2010 indicate decreases of 17.0 percent in weight and 18.2 percent in value in 2010 compared with 1990. The downward national trend in fishery landings and values between 1990 and 2010 was not experienced everywhere. The Pacific-Northwest region had the highest increase in landed weight of 44.6 percent from 1990 to 2010, whereas the Atlantic-South region suffered the highest decrease of 62.8 percent. In addition to the Pacific-Northwest, the only other region to record an increase in landed weight during 1990-2010 was Pacific-Alaska (28%). Other regions that experienced a decrease in the

landed weight included the Gulf of Mexico-East (-56.7 %), Pacific-California (-43.8%), Atlantic-Middle (-36.9%), Gulf of Mexico-West (-29.5%), and Atlantic-North (-28.9 %) (Table 16). Not all states and counties followed the overall regional pattern of increase or decrease in landed value between 1990 and 2010. States with an increase in the fishery landings included Oregon (51.4%), Washington (37.6%), and Alaska (28%). Rhode Island had the highest decrease in weight (-71.5%) followed by Texas (-67.8%), Mississippi (-65.1%), Virginia (-38.6%), and New Jersey (31.7) (Table 16).

The Pacific-Northwest and The Atlantic-Middle were the only regions with an increase in landed value between 1990 to 2010, at 20 percent and 12 percent, respectively. The Pacific-California region experienced the largest decrease in landed value at -63.4 percent, followed by The Gulf of Mexico-West (-55.1%), the Atlantic-South (-34.3%), the Gulf of Mexico-East (-18.4%), and the Pacific-Alaska (-10.7%). The states with a significant increase in the value of fishery landings from 1990 to 2010 were Maine (40.3%), New Jersey (31.4%), Florida (30.0%), and Washington (25.2%). Texas suffered the largest decline in the value of fishery landings from 1990 to 2010 with a 75.5 percent decrease. Other states that saw a decrease of more than 30 percent were Rhode Island (-72.0%), California (-63.4), Mississippi (-61.8%), Alabama (-44.1%), Louisiana (-41.9%), and Maryland (34.6%) (Table 17). As with the landed weight, landed value in U.S. states and counties did not always follow the overall patterns of the regions to which they belonged.

Table 16. Summary of commercial fishery landings, weight basis, in U.S. coastal regions, states and counties, 1990-2010

Region - State	County	1990	1995	2000	2005	2010	Average annual change	Percent Change 1990-2010
				Million	pounds			
Atlantic - North		550.5	402.3	371.3	473.6	392.0	-24.6	- 29 %
Connecticut		0.0	0.0	13.5	0.0	9.0	1.8	
	New London	0.0	0.0	13.5	0.0	9.0	1.8	
Maine		85.7	114.4	111.3	106.9	77.0	-2.5	-109
	Cumberland	49.5	66.8	63.9	56.8	38.0	-3.3	-239
	Hancock	0.0	2.2	15.9	15.5	17.0	4.7	
	Knox	36.2	44.6	28.3	34.6	22.0	-3.8	-399
	Washington	0.0	0.8	3.2	0.0	0.0	-0.1	
Massachusetts		295.5	164.0	158.0	299.7	248.0	4.1	-16
	Barnstable	32.4	18.5	18.1	12.7	15.0	-4.1	-54
	Bristol	117.8	70.8	89.9	153.4	133.0	11.3	139
	Essex	125.6	64.6	43.2	124.2	88.0	-1.6	-30
	Suffolk	19.7	10.1	6.8	9.4	12.0	-1.6	-39
New York		21.9	35.2	29.2	17.9	16.0	-2.9	-27
	Suffolk	21.9	35.2	29.2	17.9	16.0	-2.9	-27
Rhode Island		147.4	88.7	59.3	49.1	42.0	-25.0	-72
	Newport	30.0	13.2	0.0	7.3	7.0	-5.2	-77
	Washington	117.4	75.5	59.3	41.8	35.0	-19.9	-709
Atlantic - Middle		885.2	899.7	562.5	548.4	556.0	-101.0	-37
Maryland		21.1	12.5	9.6	8.0	16.0	-1.5	-24
	Worcester	21.1	12.5	9.6	8.0	16.0	-1.5	-24
New Jersey		139.1	160.9	160.5	138.8	95.0	-11.0	-32
	Atlantic	39.2	42.3	50.4	31.8	24.0	-4.1	-39
	Cape May	69.4	75.2	58.9	74.6	43.0	-5.3	-38
	Monmouth	8.2	13.6	3.9	0.0	0.0	-3.0	-100
	Ocean	22.3	29.8	47.3	32.4	28.0	1.4	26
Virginia		725.0	726.3	392.4	401.6	445.0	-88.5	-39
	Accomack	1.1	1.1	2.9	4.7	3.0	0.7	173
	Norfolk	24.3	20.3	22.7	23.5	16.0	-1.3	-34
	Northampton	7.2	0.4	0.0	0.0	0.0	-1.5	-100
	Northumberland	692.4	704.5	366.8	373.4	426.0	-86.4	-38
Atlantic - South		155.8	208.4	171.6	78.4	58.0	-32.6	-63
Florida		8.8	14.4	18.6	9.4	10.0	-0.3	14
	Brevard	8.8	10.1	10.9	4.7	4.0	-1.5	-55
	Duval	0.0	4.3	4.5	4.7	6.0	1.2	
	Saint Lucie	0.0	0.0	3.2	0.0	0.0	0.0	
Georgia		12.0	10.0	6.1	3.9	0.0	-3.0	-100
	Chatham	0.0	4.0	0.0	0.0	0.0	-0.4	
	Glynn	0.0	0.0	1.9	0.0	0.0	0.0	
	McIntosh	12.0	6.0	4.2	3.9	0.0	-2.6	-100
North Carolina		135.0	162.0	132.7	58.4	44.0	-28.6	-67
	Beaufort	0.0	10.0	7.3	0.0	0.0	-1.0	
	Carteret	102.0	87.0	68.4	19.3	6.0	-26.0	-94
	Dare	23.0	39.0	33.3	27.2	25.0	-0.8	9
	Hyde	0.0	11.0	12.0	6.8	9.0	1.4	-
	Onslow	0.0	0.0	3.1	0.0	0.0	0.0	
	Pamlico	10.0	9.0	8.6	5.1	4.0	-1.6	-60
		0.0	6.0	0.0	0.0	0.0	-0.6	30

Table 16. Summary of commercial fishery landings, weight basis, in U.S. coastal regions, states and counties, 1990-2010

Region - State	County	1990	1995	2000	2005	2010	Average annual change	Percent Change 1990-2010
				Million	pounds			
South Carolina		0.0	22.0	14.2	6.7	4.0	-0.7	
	Beaufort	0.0	7.0	4.3	0.0	0.0	-0.7	
	Charleston	0.0	11.0	6.9	6.7	4.0	0.4	
	Georgetown	0.0	4.0	3.0	0.0	0.0	-0.4	
Gulf of Mexico -								
East		376.2	221.1	292.9	236.5	163.0	-41.1	-57
Alabama		19.4	27.6	28.5	22.4	14.0	-1.6	-28
	Baldwin	5.7	5.5	5.5	5.1	11.0	1.0	93
	Mobile	13.7	22.1	23.0	17.3	3.0	-2.6	-78
Florida		38.3	52.9	50.3	46.5	38.0	-0.7	-1
	Bay	13.2	5.4	0.0	2.8	2.0	-2.5	-85
	Collier	0.0	0.0	3.5	0.0	2.0	0.4	
	Franklin	5.0	4.7	10.3	4.9	3.0	-0.4	-40
	Gulf	0.0	0.0	0.0	6.2	6.0	1.8	
	Hillsborough	0.0	10.9	11.7	10.0	5.0	0.9	
	Lee	8.7	8.5	7.9	8.6	7.0	-0.3	-20
	Monroe	11.4	23.4	16.9	14.0	13.0	-0.6	14
Mississippi		318.5	140.6	214.1	167.6	111.0	-38.8	-65
	Harrison	14.6	12.0	14.2	8.5	6.0	-2.1	-59
	Jackson	303.9	128.6	199.9	159.1	105.0	-36.7	-65
Gulf of Mexico -								
Vest		1,090.6	1,135.3	1,392.6	835.1	769.0	-94.3	-29
Louisiana		1,022.3	1,074.3	1,293.5	767.6	747.0	-85.7	-27
	Assumption	0.0	0.0	0.0	6.8	0.0	0.7	
	Cameron	232.6	280.0	414.5	10.6	150.0	-43.5	-36
	Iberia	10.2	14.0	24.7	0.0	0.0	-3.4	-100
	Jefferson	14.2	12.6	18.2	0.0	0.0	-4.1	-100
	Lafourche	20.9	18.7	26.9	24.2	14.0	-0.8	-33
	Orleans	0.0	6.5	0.0	0.0	0.0	-0.7	
	Plaquemines	252.2	303.3	403.6	194.0	281.0	-5.2	13
	Saint Bernard	8.3	9.3	15.5	7.7	5.0	-0.8	-40
	Saint Mary	146.5	127.4	20.2	17.7	5.0	-39.3	-97
	Terrebonne	164.4	123.3	48.2	42.6	32.0	-34.6	-81
	Vermilion	173.0	179.2	321.7	464.0	260.0	45.9	50
Texas		68.3	61.0	99.1	67.5	22.0	-8.6	-68
	Aransas	18.0	12.0	6.7	0.0	0.0	-4.8	-100
	Brazoria	6.2	4.0	7.5	0.0	0.0	-1.6	-100
	Calhoun	0.0	0.0	3.6	0.0	0.0	0.0	
	Cameron	25.2	16.0	29.2	20.1	22.0	-0.2	-13
	Galveston	8.0	17.0	17.4	15.1	0.0	-1.8	-100
	Harris	0.0	0.0	2.9	0.0	0.0	0.0	
	Jefferson	10.9	6.0	17.0	17.8	0.0	-1.0	-100
	Matagorda	0.0	6.0	14.8	14.5	0.0	0.9	
Pacific - Hawaii	<u></u>	0.0	23.9	27.0	22.2	23.0	4.4	
Hawaii		0.0	23.9	27.0	22.2	23.0	4.4	
	Honolulu	0.0	23.9	27.0	22.2	23.0	4.4	
Pacific - California		736.4	823.4	535.9	568.8	414.0	-89.9	-44
California		736.4	823.4	535.9	568.8	414.0	-89.9	-44

Table 16. Summary of commercial fishery landings, weight basis, in U.S. coastal regions, states and counties, 1990-2010

					2010	annual change	Change 1990-2010
			Millior	n pounds			
Colusa	0.0	13.6	0.0	0.0	0.0	-1.4	
Del Norte	62.2	43.6	15.6	14.0	13.0	-12.8	-799
Humboldt	48.8	30.2	13.7	29.8	10.0	-7.8	-80%
Los Angeles	317.0	337.0	254.7	279.4	186.0	-32.0	-419
Marin	25.2	12.8	0.0	0.0	0.0	-6.3	-1009
Mendocino	35.0	23.6	7.4	12.2	6.0	-6.9	-839
Monterey	66.2	64.0	61.4	79.0	55.0	-0.7	-179
San Diego	7.0	7.4	2.6	3.8	0.0	-1.8	-100
San Francisco	53.6	31.4	11.2	10.2	8.0	-11.2	-85
San Luis Obispo	19.4	12.4	0.0	0.0	0.0	-5.1	-100
Santa Barbara	23.2	13.8	7.1	15.8	5.0	-3.4	-78
Ventura	78.8	233.6	162.2	124.6	131.0	-0.5	66
	254.5			532.0	368.0	20.7	459
	129.5				196.0	21.4	51
Clatsop							143
•							-3
							-57
•							68
							-84
							38
Clallam							25
							282
<u>-</u>							
							-70
							, -
·							100
							74
							-68
-							-100
							-23
							-47
							28
							289
Aleutians Fast		-		-			
							0
							Ū
							-100
							37
•							-100
							100
							24
							43
•							43 19
							-100
Nome (CA)	9.0	0.0	0.0	0.0	0.0	-13.0 -1.8	-100 -100
	Del Norte Humboldt Los Angeles Marin Mendocino Monterey San Diego San Francisco San Luis Obispo Santa Barbara Ventura Clatsop Coos Curry Lincoln Tillamook Clallam Grays Harbor Jefferson King Kitsap Mason Pacific Pierce Skagit Snohomish Thurston Whatcom Aleutians East Aleutians West (CA) Anchorage Bethel (CA) Bristol Bay Dillingham (CA) Haines Juneau Kenai Peninsula Ketchikan Gateway Kodiak Island Lake and Peninsula	Del Norte 62.2 Humboldt 48.8 Los Angeles 317.0 Marin 25.2 Mendocino 35.0 Monterey 66.2 San Diego 7.0 San Francisco 53.6 San Luis Obispo 19.4 Santa Barbara 23.2 Ventura 78.8 Z54.5 129.5 Clatsop 41.2 Coos 31.8 Curry 16.4 Lincoln 34.0 Tillamook 6.1 Carys 16.4 Lincoln 34.0 Tillamook 6.1 Locos 31.8 Curry 16.4 Lincoln 34.0 Tillamook 6.1 Locos 31.8 Curry 16.4 Lincoln 34.0 Tillamook 6.1 Locos 31.8 Grays Harbor 26.2 Jefferson	Del Norte 62.2 43.6 Humboldt 48.8 30.2 Los Angeles 317.0 337.0 Marin 25.2 12.8 Mendocino 35.0 23.6 Monterey 66.2 64.0 San Diego 7.0 7.4 San Francisco 53.6 31.4 San Luis Obispo 19.4 12.4 Santa Barbara 23.2 13.8 Ventura 78.8 233.6 Clatsop 41.2 89.0 Clatsop 41.2 89.0 Curry 16.4 6.0 Curry 16.4 <td>Colusa 0.0 13.6 0.0 Del Norte 62.2 43.6 15.6 Humboldt 48.8 30.2 13.7 Los Angeles 317.0 337.0 254.7 Marin 25.2 12.8 0.0 Mendocino 35.0 23.6 7.4 Monterey 66.2 64.0 61.4 San Diego 7.0 7.4 2.6 San Francisco 53.6 31.4 11.2 San Luis Obispo 19.4 12.4 0.0 Santa Barbara 23.2 13.8 7.1 Ventura 78.8 233.6 162.2 254.5 552.0 337.4 Ventura 78.8 233.6 162.2 26.1 7.2 28.0 150.6 Clatsap 41.2 89.0 130.1 Cos 31.8 21.0 19.2 Curry 16.4 6.0 0.0 Cilatsop 4.1 6</td> <td>Colusa 0.0 13.6 0.0 0.0 Del Norte 62.2 43.6 15.6 14.0 Humboldt 48.8 30.2 13.7 29.8 Los Angeles 317.0 337.0 254.7 279.4 Marin 25.2 12.8 0.0 0.0 Mendocino 35.0 23.6 7.4 12.2 Monterey 66.2 64.0 61.4 79.0 San Diego 7.0 7.4 2.6 3.8 San Luis Obispo 19.4 12.4 0.0 0.0 Santua Barbara 23.2 13.8 7.1 15.8 Ventura 78.8 233.6 160.2 124.6 Santa Barbara 23.2 13.8 7.1 15.8 Ventura 78.8 233.6 160.2 124.6 Cos 31.8 21.0 10.2 25.7 Curry 16.4 6.0 0.0 0.0 3.4 Linco</td> <td>Colusa 0.0 13.6 0.0 0.0 1.0 Del Norte 62.2 43.6 15.6 14.0 13.0 Humboldt 48.8 30.2 13.7 29.8 10.0 Los Angeles 317.0 337.0 25.47 279.4 186.0 Monteron 35.0 23.6 7.4 12.2 6.0 Monterey 66.2 64.0 61.4 79.0 55.0 San Diego 7.0 7.4 2.6 3.8 0.0 San Francisco 53.6 31.4 11.2 10.2 8.0 San ta Barbara 23.2 13.8 7.1 15.8 5.0 Ventura 78.8 233.6 162.2 124.6 131.0 Ventura 78.8 233.6 162.2 124.6 131.0 Clatsop 41.2 89.0 130.1 164.7 100.0 Clatsop 41.2 89.0 130.1 164.7 70.0</td> <td>Colusa 0.0 13.6 0.0 0.0 1.4 Del Norte 62.2 43.6 15.6 14.0 13.0 -12.8 Humboldt 48.8 30.2 13.7 29.8 10.0 -7.8 Los Angeles 317.0 337.0 25.47 279.4 186.0 -32.0 Mendocino 35.0 23.6 7.4 12.2 6.0 -6.9 Mendocino 35.0 23.6 7.4 12.2 6.0 -6.9 Monterey 66.2 66.0 61.4 79.0 55.0 -0.7 San Diego 7.0 7.4 2.6 3.8 0.0 -1.8 San Diego 7.0 7.4 2.6 3.8 0.0 -1.2 San Diego 7.0 7.4 2.6 3.8 0.0 -1.2 San Diego 7.0 7.4 2.6 3.8 0.1 1.2 San Luis Olispo 19.1 12.4 0.0 0.0</td>	Colusa 0.0 13.6 0.0 Del Norte 62.2 43.6 15.6 Humboldt 48.8 30.2 13.7 Los Angeles 317.0 337.0 254.7 Marin 25.2 12.8 0.0 Mendocino 35.0 23.6 7.4 Monterey 66.2 64.0 61.4 San Diego 7.0 7.4 2.6 San Francisco 53.6 31.4 11.2 San Luis Obispo 19.4 12.4 0.0 Santa Barbara 23.2 13.8 7.1 Ventura 78.8 233.6 162.2 254.5 552.0 337.4 Ventura 78.8 233.6 162.2 26.1 7.2 28.0 150.6 Clatsap 41.2 89.0 130.1 Cos 31.8 21.0 19.2 Curry 16.4 6.0 0.0 Cilatsop 4.1 6	Colusa 0.0 13.6 0.0 0.0 Del Norte 62.2 43.6 15.6 14.0 Humboldt 48.8 30.2 13.7 29.8 Los Angeles 317.0 337.0 254.7 279.4 Marin 25.2 12.8 0.0 0.0 Mendocino 35.0 23.6 7.4 12.2 Monterey 66.2 64.0 61.4 79.0 San Diego 7.0 7.4 2.6 3.8 San Luis Obispo 19.4 12.4 0.0 0.0 Santua Barbara 23.2 13.8 7.1 15.8 Ventura 78.8 233.6 160.2 124.6 Santa Barbara 23.2 13.8 7.1 15.8 Ventura 78.8 233.6 160.2 124.6 Cos 31.8 21.0 10.2 25.7 Curry 16.4 6.0 0.0 0.0 3.4 Linco	Colusa 0.0 13.6 0.0 0.0 1.0 Del Norte 62.2 43.6 15.6 14.0 13.0 Humboldt 48.8 30.2 13.7 29.8 10.0 Los Angeles 317.0 337.0 25.47 279.4 186.0 Monteron 35.0 23.6 7.4 12.2 6.0 Monterey 66.2 64.0 61.4 79.0 55.0 San Diego 7.0 7.4 2.6 3.8 0.0 San Francisco 53.6 31.4 11.2 10.2 8.0 San ta Barbara 23.2 13.8 7.1 15.8 5.0 Ventura 78.8 233.6 162.2 124.6 131.0 Ventura 78.8 233.6 162.2 124.6 131.0 Clatsop 41.2 89.0 130.1 164.7 100.0 Clatsop 41.2 89.0 130.1 164.7 70.0	Colusa 0.0 13.6 0.0 0.0 1.4 Del Norte 62.2 43.6 15.6 14.0 13.0 -12.8 Humboldt 48.8 30.2 13.7 29.8 10.0 -7.8 Los Angeles 317.0 337.0 25.47 279.4 186.0 -32.0 Mendocino 35.0 23.6 7.4 12.2 6.0 -6.9 Mendocino 35.0 23.6 7.4 12.2 6.0 -6.9 Monterey 66.2 66.0 61.4 79.0 55.0 -0.7 San Diego 7.0 7.4 2.6 3.8 0.0 -1.8 San Diego 7.0 7.4 2.6 3.8 0.0 -1.2 San Diego 7.0 7.4 2.6 3.8 0.0 -1.2 San Diego 7.0 7.4 2.6 3.8 0.1 1.2 San Luis Olispo 19.1 12.4 0.0 0.0

Table 16. Summary of commercial fishery landings, weight basis, in U.S. coastal regions, states and counties, 1990-2010

Region - State	County	1990	1995	2000	2005	2010	Average annual change	Percent Change 1990-2010
				Millior	pounds			
	Prince of Wales-							
	Hyder (CA)	9.0	0.0	1.3	0.0	0.0	-1.8	-100%
	Sitka	24.4	31.0	95.5	38.1	74.0	10.6	203%
	Valdez-Cordova (CA)	116.9	72.0	0.0	111.2	147.0	9.9	26%
	Wrangell	15.6	17.2	8.3	4.4	4.0	-3.6	-74%
	Yakutat	7.9	0.0	0.0	3.9	6.0	0.0	-24%
Grand Total		5,423.4	5,847.9	5,016.7	5,094.0	4,502.0	-259.7	-17%

Table 17. Summary of commercial fishery landings, value basis, in U.S. coastal regions, states and counties, 1990-2010

Carrette	1000	1005	2000	2005	2010	Average annual	Percent change
County						change	1990-2010
	581.2	356.5	469.1	565.3	563.3	17.3	-3%
	0.0	0.0	16.5	0.0	29.1	5.8	
New London	0.0	0.0	16.5	0.0	29.1	5.8	
	53.2	67.3	100.8	82.2	74.7	5.8	40%
Cumberland	48.5	54.4	56.7	38.3	18.8	-7.5	-61%
Hancock	0.0	3.1	22.5	35.7	45.3	12.3	
Knox	4.7	7.7	10.2	8.2	10.6	1.2	123%
Washington	0.0	2.0	11.4	0.0	0.0	-0.2	
	356.2	185.0	269.2	397.5	397.6	29.5	12%
Barnstable	24.9	14.8	19.6	22.1	19.9	-0.3	-20%
Bristol	246.6	121.9	185.9	312.6	306.0	30.9	24%
Essex	62.6	34.7	52.3	50.9	56.6	0.4	-10%
Suffolk	22.0	13.6	11.4	11.8	15.1	-1.6	-31%
	32.0	37.7	30.9	27.2	22.8	-2.9	-29%
Suffolk	32.0	37.7	30.9	27.2	22.8	-2.9	-29%
	139.8	66.6	51.7	58.4	39.1	-21.0	-72%
Newport	41.6	15.5	0.0	16.0	6.9	-6.9	-83%
Washington	98.2	51.1	51.7	42.4	32.2	-14.1	-67%
	239.0	224.5	226.2	301.4	268.8	13.7	12%
	13.5	11.6	8.2	11.3	8.8	-1.0	-35%
Worcester	13.5	11.6	8.2	11.3	8.8	-1.0	-35%
	111.8	107.0	112.2	149.7	146.9	11.3	31%
Atlantic	27.2	30.2	32.6	20.5	17.3	-3.0	-36%
Cape May	52.8	41.5	35.9	75.7	81.0	9.1	53%
Monmouth	4.7	6.1	3.2	0.0	0.0	-1.6	-100%
Ocean	27.1	29.2	40.5	53.6	48.6	6.7	79%
	113.7	106.0	105.8	140.4	113.1	3.3	-1%
Accomack	2.1	1.4	3.0	16.3	3.5	1.8	63%
Norfolk	50.2	44.0	66.0	94.2	75.4	10.1	50%
Northampton	7.0	0.4	0.0	0.0	0.0	-1.4	-100%
Northumberland	54.3	60.2	36.9	30.0	34.2	-7.0	-37%
							-34%
							-13%
Brevard							-68%
							-100%
Chatham							_557
•							-100%
							-29%
Beaufort							23/0
2000.010	5.0	٥.٢	, .0	5.0	5.0	0.0	
	Cumberland Hancock Knox Washington Barnstable Bristol Essex Suffolk Suffolk Newport Washington Worcester Atlantic Cape May Monmouth Ocean Accomack Norfolk Northampton	S81.2 O.0 New London 0.0 53.2 Cumberland 48.5 Hancock 0.0 Knox 4.7 Washington 0.0 356.2 Barnstable 24.9 Bristol 246.6 Essex 62.6 5.2 32.0 Suffolk 32.0 32.0 Suffolk 32.0 139.8 Newport 41.6 41.6 Washington 98.2 239.0 Worcester 13.5 111.8 Atlantic 27.2 22.0 Cape May 52.8 111.8 Atlantic 27.2 22 Cape May 52.8 113.7 Accomack 2.1 2.1 Norfolk 50.2 2 Northumberland 54.3 118.1 Parent May 52.8 118.1 Hay 50.2 2 Northumberland 54.3 118.1 Parent May	New London 0.0	S81.2 356.5 469.1 New London 0.0 0.0 16.5 Cumberland 48.5 54.4 56.7 Hancock 0.0 3.1 22.5 Knox 4.7 7.7 10.2 Washington 0.0 2.0 11.4 Washington 0.0 2.0 11.4 Barnstable 24.9 14.8 19.6 Bristol 246.6 121.9 185.9 Essex 62.6 34.7 52.3 Suffolk 22.0 13.6 11.4 32.0 37.7 30.9 Suffolk 32.0 37.7 30.9 Suffolk 32.0 37.7 30.9 Suffolk 32.0 37.7 30.9 Suffolk 32.0 37.7 30.9 Washington 98.2 51.1 51.7 Newport 41.6 15.5 0.0 Washington 98.2 51.1 51.7	581.2 356.5 469.1 565.3 New London 0.0 16.5 0.0 New London 0.0 16.5 0.0 Cumberland 48.5 54.4 56.7 38.3 Hancock 0.0 3.1 22.5 35.7 Knox 4.7 7.7 10.2 8.2 Washington 0.0 2.0 11.4 0.0 Barnstable 24.9 14.8 19.6 22.1 Bristol 246.6 121.9 185.9 312.6 Essex 62.6 34.7 52.3 50.9 Suffolk 22.0 13.6 11.4 11.8 Essex 62.6 34.7 52.3 50.9 Suffolk 22.0 13.6 11.4 11.8 Bristol 24.6 51.7 58.4 Newport 41.6 15.5 0.0 16.0 Washington 98.2 51.1 51.7 58.4	S81.2 356.5 469.1 563.3 563.3 New London 0.0 16.5 0.0 29.1 New London 53.2 67.3 100.8 82.2 74.7 Cumberland 48.5 54.4 56.7 38.3 18.8 Hancock 0.0 3.1 22.5 35.7 45.3 Knox 4.7 7.7 10.2 8.2 10.6 Washington 0.0 2.0 11.4 0.0 0.0 Barnstable 24.9 14.8 19.6 22.1 19.9 Bristol 246.6 121.9 185.9 312.6 306.0 Essex 62.6 34.7 52.3 50.9 56.6 Suffolk 22.0 13.6 11.4 11.8 15.1 Suffolk 32.0 37.7 30.9 27.2 22.8 Suffolk 32.0 37.7 30.9 27.2 22.8 Suffolk 32.2 51.1	County 1990 1995 2000 2005 2010 change change change S81.2 356.5 469.1 563.3 56.3 17.3 New London 0.0 0.0 16.5 0.0 29.1 5.8 New London 0.0 0.0 16.5 0.0 29.1 5.8 Cumberland 48.5 53.2 67.3 100.8 82.2 74.7 5.8 Cumberland 48.5 54.4 56.7 38.3 18.8 -7.5 Hancock 0.0 3.1 22.5 35.7 45.3 12.3 Knox 4.7 7.7 10.2 8.2 10.6 12.2 Washington 0.0 2.0 11.4 0.0 0.0 -0.2 Baristable 24.9 14.8 19.6 22.1 19.9 -0.3 Bristol 246.6 121.9 185.9 312.6 30.0 30.9 Suffolk 22.0 37.7 <t< td=""></t<>

Table 17. Summary of commercial fishery landings, value basis, in U.S. coastal regions, states and counties, 1990-2010

1990-2010							Average annual	Percent change
Region - State	County	1990 	1995 Millio	2000 n dollars (2005 2010)	2010	change	1990-2010
	Dare	22.9	34.0	30.0	21.7	22.0	-1.4	-4%
	Hyde	0.0	12.2	14.0	5.9	10.6	1.5	
	Onslow	0.0	0.0	7.9	0.0	0.0	0.0	
	Pamlico	12.2	13.6	13.6	5.2	8.4	-1.6	-31%
	Pasquotank	0.0	5.4	0.0	0.0	0.0	-0.5	
South Carolina		0.0	48.9	34.6	11.5	9.9	-1.8	
	Beaufort	0.0	15.0	9.6	0.0	0.0	-1.5	
	Charleston	0.0	25.8	17.6	11.5	9.9	0.5	
	Georgetown	0.0	8.2	7.4	0.0	0.0	-0.8	
Gulf of Mexico -								
East		183.6	267.6	276.5	165.0	149.9	-17.0	-18%
Alabama		48.7	65.1	76.7	40.2	27.2	-6.8	-44%
	Baldwin	17.0	14.1	15.6	8.7	22.5	0.6	32%
	Mobile	31.7	51.0	61.1	31.4	4.7	-7.3	-85%
Florida	_	77.6	154.1	134.8	98.7	100.8	-0.9	30%
	Bay	16.2	3.3	0.0	7.2	6.1	-1.6	-62%
	Collier	0.0	0.0	11.2	0.0	7.3	1.5	200
	Franklin	11.5	13.9	14.2	9.6	9.0	-0.9	-22%
	Gulf	0.0	0.0	0.0	6.4	3.4	1.3	
	Hillsborough	0.0	24.7	25.5	19.7	12.6	2.0	2.50
	Lee	16.7	21.6	20.6	16.9	12.4	-1.3	-26%
	Monroe	33.2	90.7	63.2	38.8	50.0	-1.8	51%
Mississippi	112	57.4	48.4	65.0	26.1	21.9	-9.3	-62%
	Harrison	28.6	31.7	44.3	16.9	13.0	-4.6	-55%
Gulf of Mexico -	Jackson	28.8	16.7	20.6	9.2	8.9	-4.7	-69%
West		554.0	613.3	788.9	409.3	248.9	-81.4	-55%
Louisiana		338.3	348.2	448.4	251.3	196.4	-38.1	-42%
	Assumption	0.0	0.0	0.0	4.2	0.0	0.4	
	Cameron	31.5	37.8	59.5	15.2	11.5	-6.3	-64%
	Iberia	22.5	31.4	55.3	0.0	0.0	-7.6	-100%
	Jefferson	21.9	24.2	33.0	0.0	0.0	-6.8	-100%
	Lafourche	40.5	42.5	56.1	35.5	21.9	-4.4	-46%
	Orleans	0.0	13.9	0.0	0.0	0.0	-1.4	
	Plaquemines	87.8	79.4	90.4	72.0	74.1	-3.5	-16%
	Saint Bernard	11.6	17.4	25.1	14.2	11.7	-0.3	1%
	Saint Mary	30.1	15.4	13.2	8.0	5.7	-5.6	-81%
	Terrebonne	80.6	72.6	85.1	60.4	45.1	-8.3	-44%
	Vermilion	11.6	13.7	30.6	41.8	26.4	5.8	127%
Texas		215.7	265.0	340.5	158.0	52.5	-43.3	-76%
	Aransas	53.4	44.9	22.2	0.0	0.0	-15.2	-100%
								4000/
	Brazoria	22.6	20.4	28.5	0.0	0.0	-6.6	-100%

Table 17. Summary of commercial fishery landings, value basis, in U.S. coastal regions, states and counties, 1990-2010

1990-2010								
							Average annual	Percent change
Region - State	County	1990	1995	2000	2005	2010	change	1990-2010
			Millio	n dollars (2010)			
	Cameron	87.5	89.7	110.7	49.8	52.5	-11.0	-40%
	Galveston	19.9	51.6	51.0	35.7	0.0	-5.6	-100%
	Harris	0.0	0.0	6.7	0.0	0.0	0.0	
	Jefferson	32.3	29.9	61.6	40.1	0.0	-5.4	-100%
	Matagorda	0.0	28.5	52.2	32.4	0.0	0.4	
Pacific - Hawaii		0.0	63.5	70.0	63.5	71.6	14.3	
Hawaii		0.0	63.5	70.0	63.5	71.6	14.3	
	Honolulu	0.0	63.5	70.0	63.5	71.6	14.3	
Pacific - California		381.6	398.0	141.5	196.7	139.7	-68.5	-63%
California		381.6	398.0	141.5	196.7	139.7	-68.5	-63%
	Colusa	0.0	17.9	0.0	0.0	0.0	-1.8	
	Del Norte	51.4	31.3	13.1	14.4	10.6	-9.8	-79%
	Humboldt	39.2	28.0	9.6	15.5	9.7	-7.1	-75%
	Los Angeles	65.2	73.4	47.6	58.9	37.8	-6.9	-42%
	Marin	25.7	15.8	0.0	0.0	0.0	-6.7	-100%
	Mendocino	26.0	24.5	8.4	13.5	6.8	-4.9	-74%
	Monterey	24.5	30.4	12.1	15.5	14.1	-3.6	-42%
	San Diego	15.6	16.9	6.5	9.1	0.0	-3.9	-100%
	San Francisco	46.2	41.9	10.6	18.4	15.1	-8.6	-67%
	San Luis Obispo	15.3	17.7	0.0	0.0	0.0	-4.8	-100%
	Santa Barbara	34.3	27.5	8.4	14.8	8.2	-6.5	-76%
	Ventura	38.2	72.9	25.2	36.7	37.4	-3.8	-2%
Pacific - Northwest		229.5	232.8	149.0	273.7	276.2	13.4	20%
Oregon		85.8	91.1	82.1	91.1	96.3	2.1	12%
	Clatsop	24.8	35.3	35.0	33.5	30.5	1.0	23%
	Coos	22.2	19.0	16.4	19.6	24.0	0.4	8%
	Curry	11.8	6.8	0.0	7.0	8.6	-0.6	-27%
	Lincoln	22.5	29.9	30.7	27.3	30.6	1.4	36%
	Tillamook	4.6	0.0	0.0	3.7	2.6	0.0	-43%
Washington		143.7	141.8	67.0	182.7	179.9	11.3	25%
	Clallam	7.2	6.8	0.0	12.5	10.2	1.2	42%
	Grays Harbor	27.4	34.0	22.2	40.6	38.5	2.9	41%
	Jefferson	0.0	0.0	0.0	3.4	4.1	1.2	
	King	20.7	27.6	9.5	8.1	22.1	-1.7	7%
	Kitsap	0.0	8.2	0.0	0.0	0.0	-0.8	
	Mason	11.0	16.3	0.0	30.2	17.6	2.7	60%
	Pacific	11.0	13.6	8.6	34.5	17.9	3.5	62%
	Pierce	0.0	0.0	0.0	4.1	3.8	1.2	
	Skagit	15.9	15.0	0.0	8.7	13.6	-1.1	-15%
	Snohomish	8.0	0.0	0.0	1.3	0.0	-1.5	-100%
	Thurston	7.3	0.0	0.0	10.4	16.2	2.8	121%
	Whatcom	35.2	20.4	26.6	28.8	35.9	1.0	2%

Table 17. Summary of commercial fishery landings, value basis, in U.S. coastal regions, states and counties, 1990-2010

1330-2010								
							Average	Percent
Region - State	County	1990	1995	2000	2005	2010	annual change	change 1990-2010
region - State	County	1990			2003 (2010)		Change	1990-2010
Alaska		1,015.4	762.5	554.0	675.3	906.8	-30.4	-11%
	Aleutians East	0.0	0.0	0.0	0.0	84.1	16.8	
	Aleutians West							
	(CA)	194.8	198.7	156.0	183.8	163.1	-7.8	-16%
	Anchorage	0.0	8.0	0.5	1.1	9.5	1.2	
	Bethel (CA)	7.5	0.0	0.0	0.0	0.0	-1.5	-100%
	Bristol Bay	139.4	114.6	46.6	60.1	100.9	-13.1	-28%
	Dillingham (CA)	36.7	0.0	0.0	0.0	0.0	-7.3	-100%
	Haines	0.0	0.0	5.1	0.0	0.0	0.0	
	Juneau	0.0	0.0	14.5	26.8	23.8	7.4	
	Kenai Peninsula	117.8	89.6	98.7	115.8	150.4	9.1	28%
	Ketchikan Gateway	43.3	45.7	25.0	25.6	41.3	-2.4	-5%
	Kodiak Island	155.6	143.3	118.3	106.0	128.1	-9.2	-18%
	Lake and Peninsula	102.4	0.0	0.0	0.0	0.0	-20.5	-100%
	Nome (CA)	4.1	0.0	0.0	0.0	0.0	-0.8	-100%
	Petersburg (CA)	60.3	60.9	24.2	41.1	36.3	-6.8	-40%
	Prince of Wales-							
	Hyder (CA)	6.0	0.0	2.0	0.0	0.0	-1.2	-100%
	Sitka	33.8	44.0	55.7	49.5	62.2	6.2	84%
	Valdez-Cordova							
	(CA)	87.7	48.4	0.0	51.5	84.3	-0.4	-49
	Wrangell	12.9	9.4	7.4	6.9	7.9	-1.2	-39%
	Yakutat	13.3	0.0	0.0	7.3	14.9	1.0	12%
Grand Total		3,302.3	3,145.6	2,858.6	2,728.1	2,702.8	-161.7	-18%

Note: fishery landings data not available for Great Lakes.

Trends and Forecast of Cruise Ship Activity

Table 18 summarizes information on cruise ship passenger nights for U.S. ports during the period 2004 to 2011, by region, state, county and port city. In 2011, Ft. Lauderdale (Broward County), Florida had the highest number of passenger nights, exceeding 10 million, but thirteen other ports in the United States had cruise ship passenger nights exceeding one million that year. These included New York City (3.47 million), Los Angeles, California (3.23 million), Seattle, Washington (3.22 million), Anchorage, Alaska (2.06 million), Galveston, Texas (2.0 million), Tampa, Florida (1.81 million), New Orleans, Louisiana (1.50 million), Baltimore, Maryland (1.44 million), Hudson, New Jersey (1.27 million), and San Diego, California (1.12 million).

There was wide variation in cruise ship activity from 2004 to 2011. In 2004, there were twelve counties with more than one million cruise ship passenger nights. Broward, Miami-Dade, and Brevard counties in Florida had the highest annual average number of cruise ship passenger nights during 2004-2011. Among ports with more than one million passenger nights, Hudson, New Jersey had the highest increase in the number of passenger nights (102%) followed by Baltimore (65%), Seattle (57%), Ft. Lauderdale (8%) and New York City (5%), while Honolulu had the largest decrease (-52%), followed by New Orleans in (-39.3 percent), San Diego (-31.5 percent), Galveston (-29.2 percent), Tampa (-28.7 percent), Los Angeles (-28.2 percent), Anchorage (27.0 percent), Miami (-21.3 percent), and Brevard County (Port Canaveral), Florida (-13.6 percent).

Predictions of cruise ship activity in 2020 were made for five ports in which regression analyses yielded a statistically significant slope coefficient. Two ports were forecast to have increasing activity, Seattle, Washington and Hudson, New Jersey, while ports with expected lower activity included Tampa, Florida, Mobile, Alabama, and Charleston, South Carolina.

Table 18. Cruise ship thousand-passenger nights, by U.S. state and port city, 2004, 2011, and forecast for 2020

State	County (Port city)	2004 Passenger nights (1,000)	2011 Passenger nights (1,000)	2004- 2011 Total	2004- 2011 Average	2004- 2011 Percent change	2020 Prediction
Florida	Broward (Fort Lauderdale)	9,438	10,197	80,090	10,011	8.0%	
Florida	Miami-Dade (Miami)	9,841	7,743	86,410	10,801	-21.3%	
Florida	Brevard (Port Canaveral)	6,114	5,281	48,301	6,038	-13.6%	
New York	New York (New York)	3,313	3,471	28,084	3,511	4.8%	
California	Los Angeles (Long Beach)	4,498	3,228	41,046	5,131	-28.2%	
Washington	King (Seattle)	2,055	3,216	22,713	2,839	56.5%	5,020
Alaska	Anchorage (Anchorage)	2,824	2,060	20,868	2,608	-27.0%	
Texas	Galveston (Galveston Island)	2,822	1,997	22,871	2,859	-29.2%	
Florida	Hillsborough (Tampa)	2,534	1,806	18,848	2,356	-28.7%	1,250
Louisiana	Orleans (New Orleans)	2,477	1,505	11,504	1,438	-39.3%	
Maryland	Baltimore (Baltimore)	872	1,436	6,854	857	64.6%	
New Jersey	Hudson (Cape Liberty)	631	1,273	9,366	1,171	101.6%	2,383
California	San Diego (San Diego)	1,632	1,118	17,188	2,148	-31.5%	
Hawaii	Honolulu (Honolulu)	1,713	819	12,483	1,675	-52.2%	
Alabama	Mobile (Mobile)	134	689	4,498	562	412.7%	1,581
Florida	Duval (Jacksonville)	679	675	5,375	672	-0.7%	
South Carolina	Charleston Charleston)	277	670	3,190	399	141.6%	1,085
California	San Francisco (San Francisco)	874	495	5,729	716	-43.4%	0
Massachusetts	Suffolk (Boston)	541	457	4,203	525	-15.5%	
Alaska	Kenai Peninsula (Seward)	538	456	4,048	506	-15.2%	
Alaska	Valdez-Cordova (Whittier)	618	435	5,245	656	-29.6%	
Virginia	Norfolk (Norfolk)	389	36	1,847	231	-90.8%	0
Pennsylvania	Philadelphia (Philadelphia)	217	0	1,338	167	-100.0%	0
Mississippi	Harrison (Gulfport)	20	0	20	2	-100.0%	
Texas	Harris (Houston)	592	0	1,893	237	-100.0%	0
Total all ports		55,643	49,063	464,012	58,117	11.83%	

Note: predictions for 2020 were based on a linear Ordinary Least Squares regression over time. Predicted values for 2020 were only shown when the regressions yielded a statistically significant slope coefficient.

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Appendix A: Detailed Data Tables for U.S. Coastal Regions, States and Counties

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business	Employment (jobs)	Wages (Million \$)	GDP (Million \$)
	Establishments			
Atlantic - North	30,955	439,633	12,920	26,45
Connecticut	2,548	30,983	796	1,56
Fairfield	1,092	12,466	366	75
Middlesex	210	2,920	87	16
New Haven	752	9,145	207	38
New London	494	6,451	136	27
Maine	2,594	34,915	1,068	1,77
Cumberland	809	13,144	278	53
Hancock	403	3,397	83	17
Kennebec	15	175	8	-
Knox	294	2,152	51	9
Lincoln	279	2,331	95	14
Penobscot	14	289	15	2
Sagadahoc	13	185	12	-
Waldo	88	929	26	4
Washington	111	898	28	4
York	568	11,414	472	68
Massachusetts	5,079	77,043	2,527	4,57
Barnstable	1,287	14,336	333	6!
Bristol	512	6,492	279	53
Dukes	165	1,525	49	Ç
Essex	902	11,570	273	48
Middlesex	374	10,982	709	1,15
Nantucket	126	1,227	40	-
Norfolk	430	7,454	188	34
Plymouth	557	7,501	163	28
Suffolk	726	15,955	493	96
New Hampshire	655	9,130	192	3!
Rockingham	495	7,287	157	30
Strafford	160	1,843	35	į
New York	18,160	265,413	8,092	17,30
Bronx	552	4,343	109	19
Dutchess	691	8,235	167	33
Kings	2,346	16,922	369	7:
Nassau	1,150	13,154	330	59
New York	7,279	152,252	5,127	11,96
Orange	743	8,272	138	28
Putnam	193	1,645	47	-
Queens	964	8,570	193	3!
Richmond	677	7,909	201	3!
Rockland	672	6,707	155	27
Suffolk	2,021	27,987	1,019	1,67
Ulster	508	5,707	114	24
Westchester	364	3,707	122	2:
Rhode Island	1,919	28,227	661	1,33
Bristol	159	2,696	105	1!
Kent	318	5,816	110	22
Newport	460	6,224	147	33
Providence	512	8,107	177	35
Washington	470	5,384	122	26
Atlantic - Middle	18,094	323,198	10,021	16,94
Delaware	927	16,157	354	6!
Kent	148	3,230	55	10
New Castle	390	6,629	157	27
Sussex	389	6,298	141	27
Maryland	4,157	7 8,902	2,386	4,25

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business Establishments	Employment (jobs)	Wages (Million \$)	GDP (Million \$)	
Anne Arundel	900	19,926	645	1,047	
Baltimore	460	7,202	203	330	
Baltimore City	780	14,924	430	900	
Calvert	148	2,623	63	113	
Caroline	8	627	42	53	
Cecil	191	3,398	90	155	
Charles	103	1,435	28	55	
Dorchester	94	1,489	43	82	
Harford	222	5,242	122	220	
Kent	101	1,591	73	102	
Prince George's	86	3,575	240	43:	
Queen Anne's	146	2,317	47	9(
Somerset	61	866	31	5(
St. Mary's	190	2,819	40	83	
Talbot	170	3,077	98	162	
Wicomico	36	938	57	69	
Worcester	461	6,853	131	307	
New Jersey	7,011	99,491	3,259	5,38 3	
Atlantic	667	11,081	299	48	
Bergen	132	3,003	165	27:	
Burlington	55	2,563	118	17:	
Camden	207	3,472	116	184	
Cape May	1,005	9,820	257	45	
Cumberland	170	2,314	74	100	
Essex	498	5,341	169	29	
Gloucester	46	845	43	6!	
Hudson	1,233	16,922	491	90:	
Middlesex	330	9,590	404	640	
Monmouth	1,035	11,983	290	480	
Ocean	1,140	12,606	279	473	
Passaic	56	2,474	204	29:	
Salem	68	1,054	21	38	
Somerset	34	798	65	100	
Union	335	5,626	264	41	
Pennsylvania	1,840	32,764	863	1,609	
Bucks	75	1,908	82	124	
Delaware	134	1,378	33	6:	
Philadelphia	1,631	29,478	748	1,42	
Virginia	4,159	92,083	2,924	4,79	
Accomack	115	1,153	2,324 21	4,73.	
Alexandria	9	246	14	2:	
Arlington	14	291	16	2.	
Caroline	7	240	10	15	
Charles City	4	32	2	1.	
Chesapeake	77	4,770	328	429	
Chesterfield	31	4,770 720	24		
				30	
Colonial Heights	1 30	34	2 7	1	
Essex		463		1	
Fairfax	0	0	0	(
Fairfax City	2	19	1		
Falls Church	1	34	2		
Franklin City	2	38	2		
Fredericksburg	5	74	3	4.4	
Gloucester	97	2,211	91	11	
Hampton	271	5,793	113	20	
Hanover	12	178	9	1	
Henrico	31	588	24	3	
Hopewell	1	34	2	:	
Isle of Wight	45	724	15	29	

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business Establishments	Employment (jobs)	Wages (Million \$)	GDP (Million \$)
James City	123	2,908	57	123
King and Queen	4	294	20	25
King George	42	395	6	1:
King William	6	69	3	1.
Lancaster	56	1,212	52	82
Manassas	0	0	0	(
		0		
Manassas Park	0		0	(
Mathews	27	498	26	3.
Middlesex	53	1,442	82	10
New Kent	5	82	5	
Newport News	386	7,877	156	26
Norfolk	543	10,118	354	83
Northampton	58	451	9	1
Northumberland	60	637	34	5
Petersburg	5	120	6	1
Poquoson	24	165	4	
Portsmouth	40	8,636	579	69
Prince George	8	1,398	49	7
Prince William	291	5,426	96	18
Richmond	16	172	4	10
Richmond City	40	447	22	3
•	13	712	31	4
Spotsylvania				
Stafford	123	2,076	33	6
Suffolk	150	3,281	59	10
Surry	4	42	0	
Virginia Beach	1,115	21,327	451	78
Westmoreland	47	555	12	4
Williamsburg	2	48	3	
York	163	4,050	86	16
tlantic - South	14,512	258,729	6,190	14,31
Florida	8,706	146,960	4,058	9,64
Baker	2	43	2	
Bradford	4	39	2	
Brevard	1,145	15,718	272	58
Broward	1,627	27,194	760	1,67
Clay	26	484	25	5
Duval	844	16,945	489	1,04
		•		
Flagler	136	1,646	32	7
Indian River	279	3,379	69	15
Lake	27	460	21	3
Martin	503	6,233	136	29
Miami-Dade	428	15,375	858	2,67
Nassau	145	3,223	68	15
Okeechobee	12	173	8	1
Orange	116	3,822	161	27
Osceola	17	302	14	3
Palm Beach	1,734	29,205	712	1,57
Putnam	13	99	4	_,-
Seminole	46	226	9	1
St. Johns	379	7,060	150	34
St. Lucie	315	3,303	69	15
Volusia	908	12,034	199	43
Georgia	1,011	19,622	439	90
Brantley	1	3	0	
Bryan	58	744	12	2
Camden	67	719	14	3
Charlton	0	0	0	
Chariton				
Chatham	497	10,904	254	48

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business Establishments	Employment (jobs)	Wages (Million \$)	GDP (Million \$)
Glynn	304	6,019	123	29
Liberty	27	360	11	2
Long	0	0	0	_
McIntosh	45	453	10	2
Wayne	3	53	3	_
North Carolina	2,100	33,455	549	1,15
Beaufort	93	1,271	20	5
Bertie	16	189	3	
Brunswick	216	2,358	40	8
Camden	9	41	1	J
Carteret	293	4,198	91	19
Chowan	33	523	10	2
Craven	150	2,964	41	8
Currituck	66	475	8	1
Dare	266	3,734	75	16
Gates	200	3,734	73	10
Hertford	1	32	1	
				2
Hyde	32	343	6	
New Hanover	468	9,203	138	27
Onslow	250	5,365	73	14
Pamlico	41	333	6	1
Pasquotank	72	1,319	17	3
Pender	54	598	10	2
Perquimans —	14	179	3	
Tyrrell	8	35	1	
Washington	16	259	3	
South Carolina	2,695	58,692	1,144	2,60
Beaufort	539	9,765	192	44
Berkeley	25	561	17	3
Charleston	1,038	22,964	481	1,06
Colleton	17	187	6	1
Dorchester	16	257	12	2
Georgetown	199	3,222	54	11
Horry	809	21,243	374	89
Jasper	52	493	7	1
ulf of Mexico - East	13,109	200,584	4,729	10,91
Alabama	950	18,244	514	1,50
Baldwin	494	7,204	122	28
Mobile	456	11,040	391	1,22
Florida	11,294	169,813	3,993	8,89
Alachua	24	1,431	55	10
Bay	689	10,692	218	49
Calhoun	7	206	10	3
Charlotte	359	4,260	79	18
Citrus	159	1,591	37	8
Collier	620	10,987	276	65
Columbia	6	140	7	1
DeSoto	3	5	0	_
Dixie	18	100	2	
Escambia	641	10,096	160	34
Franklin	74	675	13	2
Gadsden	5	36	2	2
Gilchrist	1	29	1	2
	1	29 56	3	
Glades				
Gulf	38	278	5	1
Hamilton	1	6	1	4
Hardee	4	44	2	1
Hendry	6	92	5	1
Hernando	39	430	13	4

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business Establishments	Employment (jobs)	Wages (Million \$)	GDP (Million \$)	
Highlands	11	257	12	28	
Hillsborough	1,233	20,961	568	1,195	
Holmes	5	36	2	1,133	
Jackson	6	103	5	20	
Jefferson	5	71	2	20	
Lafayette	1	56	3		
Lee	1,212	15,172	308	693	
Leon	23	301	13	48	
	25 75	609	13	3!	
Levy					
Liberty	0	0	0	(
Madison	0	0	0	27	
Manatee	581	8,548	191	37	
Marion	33	597	25	9	
Monroe	836	10,093	270	63	
Okaloosa	601	9,153	164	37	
Pasco	315	3,531	80	19	
Pinellas	2,243	34,306	838	1,80	
Polk	65	5,141	201	37	
Santa Rosa	297	3,639	60	13	
Sarasota	744	11,209	233	51	
Sumter	7	134	6	1	
Suwannee	2	11	1		
Taylor	47	588	12	2	
Wakulla	44	462	6	1	
Walton	211	3,619	91	21	
Washington	2	62	3	1	
Mississippi	865	12,527	221	50	
Hancock	87	912	18	6	
Harrison	457	7,347	118	25	
Jackson	321	4,269	85	18	
ulf of Mexico - West	8,255	237,968	19,928	83,47	
Louisiana	3,207	80,719	4,177	16,36	
Calcasieu	91	3,393	202	38	
Cameron	33	311	20	12	
Iberia	175	5,308	272	73	
Jefferson	580	15,104	646	1,27	
Lafourche	207	6,173	433	1,46	
Livingston	26	399	19	5	
Orleans	822	21,324	970	6,54	
Plaquemines	170	2,507	150	1,11	
St. Bernard	88	1,696	83	26	
St. Charles	47	816	45	8	
St. James	22	464	43 37	13	
St. John the Baptist	28	957	52	10	
St. Martin	43	399 5 131	14	4.20	
St. Mary	134	5,131	402	1,39	
St. Tammany	148	1,512	75	16	
Tangipahoa 	40	1,511	59	9	
Terrebonne	429	11,462	582	1,32	
Vermilion	124	2,251	115	1,01	
Texas	5,048	157,249	15,751	67,10	
Aransas	97	1,425	47	10	
Brazoria	136	2,182	110	25	
Calhoun	84	1,428	72	24	
Cameron	237	4,782	128	25	
Chambers	48	606	23	4	
Galveston	514	10,273	218	43	
Harris	2,430	107,345	13,798	61,07	

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Kenedy 2 75 10 51 Kleberg 74 1,794 111 495 Liberty 45 163 8 21 Matagorda 109 1,731 53 107 Nueces 734 14,054 418 1,160 Orange 34 719 36 81 Refugio 34 454 16 59 San Patricio 135 2,100 58 125 Victoria 95 3,615 472 2,257 Willacy 5 131 10 35 Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 3,872 94,275 <th></th> <th>Numbar</th> <th></th> <th><u> </u></th> <th></th>		Numbar		<u> </u>	
	Region - State - County		Employment		
Jefferson 192 3,918 146 279 Kenedy 2	negion – State - County		(jobs)	(Million \$)	(Million \$)
Kenedy 2 75 10 51 Kleberg 74 1,794 111 495 Llberty 45 163 8 21 Matagorda 109 1,731 53 107 Nucces 734 14,054 418 1,160 Orange 34 719 36 81 Refugio 34 454 16 69 San Patricio 135 2,100 58 125 Victoria 95 3,615 472 2,257 Willacy 5 131 10 35 Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 1,903 3,621 <td>Jefferson</td> <td></td> <td>3.918</td> <td>146</td> <td>279</td>	Jefferson		3.918	146	279
Kleberg					
Liberty	•				
Nucces	_	45		8	21
Orange 34 719 36 81 Refugio 34 454 16 59 San Patricio 135 2,100 58 125 Victoria 95 3,615 472 2,257 Willacy 5 131 10 35 Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 562 11,457 343 691 Honolulu 2,391 57,929 1,714 2,801 Kauai 881 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 55 Humbolot 337 4,152 78 162 Los Angeles <t< td=""><td>Matagorda</td><td>109</td><td>1,731</td><td>53</td><td>107</td></t<>	Matagorda	109	1,731	53	107
Refugio 34 454 16 59 San Patricio 135 2,100 58 125 Victoria 95 3,615 472 2,257 Willacy 5 131 10 35 Pacific - Hawaii 3,872 94,275 2,857 5,156 Honolulu 2,391 57,929 1,714 2,801 Kalawao 0 0 0 0 0 Kauai 88 18,000 597 1,243 Pacific - California 19,003 426,744 15,394 30,795 Califoria 19,003 426,744 15,394 30,795		734	14,054	418	1,160
San Patricio 135 2,100 58 125 Victoria 95 3,615 472 2,257 Willacy 5 131 10 38 Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 562 11,457 343 656 Honolulu 2,391 57,929 1,714 2,801 Kalawa 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 55 Humboldt 337 4152 78 162	Orange	34	719	36	81
Victoria 95 3,615 472 2,257 Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 3,872 94,275 2,857 5,156 Hawaii 562 11,457 343 691 Honolulu 2,391 57,929 1,714 2,801 Kalawao 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 30,795 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 555 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 568 8,629 232 447	Refugio	34	454	16	59
Willacy 5 131 10 35 Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 3,872 94,275 2,857 5,156 Hawaii 562 11,457 343 691 Honolulu 2,391 57,929 1,714 2,801 Kalawao 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 55 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 568 8,629 232 474 <t< td=""><td>San Patricio</td><td>135</td><td>2,100</td><td>58</td><td>125</td></t<>	San Patricio	135	2,100	58	125
Pacific - Hawaii 3,872 94,275 2,857 5,156 Hawaii 562 11,457 343 691 Honolulu 2,391 57,929 1,714 2,801 Kalawao 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 555 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 568 8,629 232 474 Mendocino 173 1,959 44 91	Victoria	95	3,615	472	2,257
Hawaii 3,872 94,275 2,857 5,156 Hawaii 562 11,457 343 691 Honolulu 2,391 57,929 1,714 2,801 Kalawao 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 1,557 Contra Costa 7,40 10,741 268 563 Dalifornia 113,003 336	Willacy	5	131	10	35
Hawaii 562 11,457 343 691 Honolulu 2,391 57,929 1,714 2,801 Kalawao 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific-California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 75 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 568 8,629 232 474 Mendocino 173 1,959 44 91 Montrey 577 12,873 338 712 Napa 24 343 16 37 Orange <td< td=""><td>Pacific - Hawaii</td><td>3,872</td><td>94,275</td><td>2,857</td><td>5,156</td></td<>	Pacific - Hawaii	3,872	94,275	2,857	5,156
Honolulu 2,391 57,929 1,714 2,801 Kalawaa 0 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Nore 117 1,027 27 55 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 558 8,629 322 474 Mendocino 173 1,959 44 91 Monterey 577 12,873 338 712 Napa 24 433 16 37 Orange<	Hawaii		94,275	2,857	5,156
Kalawao 0 0 0 0 Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 555 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 568 8,629 232 474 Mendocino 173 1,959 44 91 Monterey 577 12,873 338 712 Napa 24 343 16 37 Orange 1,736 48,993 1,853 3,511 San Diego <th< td=""><td>Hawaii</td><td></td><td></td><td></td><td>691</td></th<>	Hawaii				691
Kauai 281 6,890 202 431 Maui 638 18,000 597 1,234 Pacific - California 19,003 426,744 15,394 30,795 California 19,003 426,744 15,394 30,795 Alameda 1,574 26,199 754 1,557 Contra Costa 740 10,741 268 563 Del Norte 117 1,027 27 55 Humboldt 337 4,152 78 162 Los Angeles 2,842 90,100 4,976 9,555 Marin 568 8,629 232 474 Mendocino 173 1,959 44 91 Marin 568 8,629 3232 474 Mendocino 173 1,959 44 91 Monterey 577 12,873 338 712 Marin 46 437 433 16 33 12					2,801
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Sonoma 336 5,515 120 237 Ventura 774 13,100 356 1,070 Yolo 44 2,736 113 179 Pacific - Northwest 6,878 119,783 4,714 9,899 Oregon 1,359 16,534 506 1,017 Benton 11 96 5 14 Clatsop 259 3,450 100 192 Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46	Solano				238
Yolo 44 2,736 113 179 Pacific - Northwest 6,878 119,783 4,714 9,899 Oregon 1,359 16,534 506 1,017 Benton 11 96 5 14 Clatsop 259 3,450 100 192 Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4	Sonoma	336	5,515	120	237
Pacific - Northwest 6,878 119,783 4,714 9,899 Oregon 1,359 16,534 506 1,017 Benton 11 96 5 14 Clatsop 259 3,450 100 192 Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4	Ventura	774	13,100	356	1,070
Oregon 1,359 16,534 506 1,017 Benton 11 96 5 14 Clatsop 259 3,450 100 192 Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4	Yolo	44	2,736	113	179
Benton 11 96 5 14 Clatsop 259 3,450 100 192 Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4	Pacific - Northwest			4,714	9,899
Clatsop 259 3,450 100 192 Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4	Oregon	1,359		506	1,017
Columbia 88 1,326 46 97 Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4					14
Coos 219 2,642 77 152 Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4	•				192
Curry 125 1,208 34 67 Douglas 52 1,022 54 113 Lane 109 1,206 37 86 Lincoln 355 4,108 100 191 Polk 9 38 2 6 Tillamook 85 873 26 50 Washington 37 516 24 46 Yamhill 10 49 2 4					97
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vvasiiiigton 5,519 103,248 4,208 8,882					
	vvasnington	5,519	103,248	4,208	8,882

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business Establishments	Employment (jobs)	Wages (Million \$)	GDP (Million \$)	
Clallam	248	3,158	111	23	
Grays Harbor	264	3,514	124	26	
Island	166	2,520	90	18	
Jefferson	143	2,639	125	26	
King	2,070	39,488	1,558	3,38	
_	2,070 49	•	1,338 805		
Kitsap Mason	137	10,925	53	1,64 11	
Pacific	168	1,720	55 44	9	
		1,263			
Pierce	656	11,817	359	69	
San Juan	121	941	22	5	
Skagit	283	6,953	362	74	
Snohomish	647	7,758	176	39	
Thurston	43	826	47	9	
Wahkiakum	7	40	1		
Whatcom	517	9,684	333	70	
Pacific - Alaska	2,085	37,552	1,978	8,73	
Alaska	2,085	37,552	1,978	8,73	
Aleutians East	18	294	9	2	
Aleutians West	35	2,201	79	19	
Anchorage	774	15,732	799	5,23	
Bethel	17	70	2		
Bristol Bay	21	797	28	5	
Dillingham	15	252	21	10	
Haines	36	329	16	6	
Hoonah-Angoon	0	0	0		
Juneau	118	1,536	45	21	
Kenai Peninsula	362	2,409	78	59	
Ketchikan Gateway	106	1,046	43	11	
Kodiak Island	86		58	12	
		1,920			
Lake and Peninsula	13	139	5	1	
Matanuska-Susitna	194	2,820	130	61	
Nome	17	108	12	5	
North Slope	34	5,689	545	95	
Northwest Arctic	6	28	2		
Prince of Wales-Outer					
Ketchikan Ketchikan	0	0	0		
Sitka	79	531	19	3	
Valdez-Cordova	138	1,351	70	27	
Wade Hampton	4	120	5	1	
Wrangell-Petersburg	0	0	0		
Yakutat City and Borough	12	179	12	5	
Great Lakes - West	8,457	167,728	3,741	7,81	
Illinois	2,471	76,658	2,201	4,73	
Cook	2,137	70,446	2,026	4,39	
Lake	334	6,212	175	34	
Indiana	435	7,485	140	25	
La Porte	121	2,554	44	8	
Lake	163	1,963	51	9	
Porter	151	2,968	45	8	
Michigan	3,364	44,877	774	1,57	
Alcona	11	30	1	1,37	
Alger	42	175	5		
Allegan	107	1,423	25 11	5	
Alpena	60	545	11	2	
Antrim	32	256	5	1	
Arenac	40	155	4	1	
Baraga	22	225	3	_	
Bay	122	2,797	48	9	
Benzie	30	237	6	1	

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business Establishments	Employment (jobs)	Wages (Million \$)	GDP (Million \$)
Berrien	224	2,874	46	9
Charlevoix	46	502	13	2
Cheboygan	104	811	16	3
Chippewa	107	713	18	3
Delta	101	1,394	23	4
Emmet				5
	139	1,293	28	
Gogebic	45	353	3	22
Grand Traverse	326	5,001	100	22
Houghton	23	242	7	1
Huron	56	383	8	1
losco	46	505	6	1
Keweenaw	21	328	9	1
Leelanau	81	852	19	3
Luce	20	139	2	
Mackinac	126	1,314	33	7
Manistee	66	545	9	2
Marquette	156	2,711	35	7
Mason	82	862	16	2
Menominee	37	576	11	1
Muskegon	148	2,456	37	6
Oceana	56	460	8	1
Ontonagon	9	20	0	_
	177		38	7
Ottawa Dragowa Jala		2,511		•
Presque Isle	27	230	4	4.0
Saginaw	278	6,770	92	18
Sanilac	28	279	7	1
Schoolcraft	28	163	3	
St. Clair	260	3,888	56	10
Tuscola	15	149	7	1
Van Buren	66	709	10	2
Minnesota	301	5,434	83	17
Carlton	4	105	5	
Cook	58	662	11	2
Lake	43	628	8	1
St. Louis	196	4,040	59	12
Wisconsin	1,886	33,274	543	1,08
Ashland	45	, 690	11	
Bayfield	52	482	8	1
Brown	263	5,027	77	15
Door	222	2,489	43	1.
	97		39	6
Douglas Iron	2	1,904 14	1	
Kenosha	110	1,773	26	
Kewaunee	45	416	5	1
Manitowoc	110	1,817	25	5
Marinette	52	817	12	2
Milwaukee	531	11,253	194	38
Oconto	23	324	6	1
Ozaukee	113	2,194	29	5
Racine	92	1,544	29	5
Sheboygan	129	2,530	38	8
reat Lakes - East	5,665	92,062	1,774	3,37
Michigan	946	17,469	449	78
Macomb	254	4,084	136	22
Monroe	153	2,629	55	22
	539			
Wayne		10,756	258	45
New York	2,511	34,170	568	1,15
Cayuga	43	357	8	2
Chautauqua	334	4,600	70	15

Table A1. Ocean-related economic activity for U.S. coastal regions, states and counties in 2009

Region – State - County	Number Business	Employment (jobs)	Wages (Million \$)	GDP (Million \$)
	Establishments			
Erie	715	12,455	213	420
Franklin	100	689	10	20
Jefferson	118	927	19	41
Monroe	298	5,275	107	197
Niagara	445	5,051	70	139
Orleans	19	74	2	4
Oswego	146	1,402	18	39
St. Lawrence	212	2,684	39	92
Wayne	81	656	11	19
Ohio	1,999	37,605	714	1,358
Ashtabula	150	1,942	28	56
Cuyahoga	655	12,565	299	557
Erie	218	5,161	73	162
Lake	390	7,657	106	208
Lorain	119	1,504	22	42
Lucas	268	5,352	85	159
Ottawa	174	1,971	48	93
Sandusky	10	183	7	12
Wood	15	1,271	45	69
Pennsylvania	209	2,817	43	89
Erie	209	2,817	43	89
Grand Total	130,885	2,400,532	84,427	218,085

Source: National Ocean Economics Program, Ocean Economy Dataset

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Domina Ctata C	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total
Region – State - County		MC30UTCES		(Million Dollars			
Atlantic - North	676.4	737.9	59.3	967.9	20,772.8	3,237.6	26,452.0
Connecticut	19.5	13.5	5.4	63.9	1,151.9	315.2	1,569.3
Fairfield	2.5	8.9	2.2	13.8	544.5	180.3	752.3
Middlesex	11.5	1.5	0.0	0.0	110.5	38.4	162.0
New Haven	2.9	1.3	1.2	13.8	265.0	95.8	380.
New London	2.6	1.8	2.0	36.2	231.8	0.7	275.
Maine	20.6	59.9	4.9	564.8	886.7	235.4	1,772.
Cumberland	9.5	8.3	0.7	5.5	370.2	138.0	532.
Hancock	0.6	33.0	0.2	19.4	114.2	2.1	169.
Kennebec	0.7	2.6	0.2	4.6	0.0	3.6	11.
Knox	0.7	1.2	0.2	11.0	67.0	15.3	95.
Lincoln	3.7	3.1	0.2	69.1	51.2	19.2	146.
Penobscot	0.0	0.5	1.0	13.8	0.0	5.2	20.
Sagadahoc	0.7	4.1	0.2	9.2	0.0	3.8	18.
Waldo	0.7	2.6	0.2	0.8	24.3	19.2	47.
Washington	0.0	2.8	0.5	18.4	14.4	7.7	43.
York	3.7	1.8	1.2	413.0	245.4	21.2	686
Massachusetts	87.9	437.5	13.5	89.1	2,523.9	1,425.1	4,577
Barnstable	8.2	10.5	1.5	0.8	612.1	22.3	655
Bristol	5.2	250.5	1.7	16.9	82.6	175.9	533
Dukes	0.3	2.9	0.0	4.6	77.7	7.7	93
Essex	7.5	121.0	5.2	23.0	303.0	25.2	485
Middlesex	24.9	3.7	1.1	13.8	184.6	926.5	1,154
Nantucket	0.0	0.3	0.0	9.2	60.8	0.0	70
Norfolk	30.0	6.7	1.2	4.6	243.1	56.5	342
Plymouth	6.4	4.5	2.0	2.3	184.9	81.1	281
Suffolk	5.2	37.4	0.7	13.8	774.9	129.9	962
New Hampshire	3.0	9.3	3.6	13.8	268.1	61.0	358
Rockingham	3.0	8.8	2.2	4.6	229.0	53.9	301
Strafford	0.0	0.5	1.5	9.2	39.1	7.0	57
New York	477.9	167.1	26.3	597.5	14,967.5	1,069.1	17,305
Bronx	14.8	17.0	0.4	21.2	119.8	22.4	195
Dutchess	5.6	1.1	1.3	21.2	238.2	46.9	314
Kings	85.3	85.1	0.9	4.2	569.3	27.6	772
Nassau	17.5	10.0	1.2	63.6	447.6	49.8	589
New York	228.5	20.6	3.2	0.0	11,528.8	183.3	11,964
Orange	4.0	1.0	2.1	0.0	260.3	14.6	282
Putnam	7.4	0.4	0.0	21.2	39.1	5.9	74
Queens	28.9	5.6	10.3	0.0	210.8	94.6	350
Richmond	24.6	0.8	0.0	63.6	222.4	43.9	355
Rockland	7.4	1.9	0.0	21.2	203.7	40.2	274
Suffolk	28.9	17.0	3.1	339.0	793.0	497.9	1,679
Ulster	1.9	1.5	2.1	21.2	201.1	12.1	239
Westchester	23.2	5.2	1.6	21.2	133.1	30.0	214
Rhode Island	12.1	53.4	4.4	115.8	974.8	173.5	1,334
Bristol	1.5	4.1	0.0	92.1	49.0	7.7	154
Kent	0.7	2.5	0.7	9.2	196.9	15.3	225
Newport	3.0	1.5	0.5	0.5	278.7	46.0	330
Providence	3.0	1.5	1.7	13.8	277.5	58.4	355
Washington	3.9	43.8	1.5	0.2	172.7	46.0	268
Atlantic - Middle	625	199	99	3,235	7,687	5,099	16,94
Delaware	13.3	7.8	2.3	42.4	445.5	144.3	655
Kent	1.9	1.5	0.4	0.0	80.7	23.5	107
New Castle	7.4	3.0	0.9	21.2	148.3	91.5	272
Sussex	4.1	3.3	1.0	21.2	216.6	29.3	275
Maryland	174.5	50.8	25.0	778.7	2,228.7	996.4	4,254
Anne Arundel	36.8	8.3	3.0	360.2	548.0	90.8	1,047
Baltimore	31.1	4.6	1.7	84.8	137.6	70.0	329

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Region – State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total
,				(Million Dollars)		
Baltimore City	29.9	3.0	0.0	15.9	633.5	217.7	900.0
Calvert	9.3	0.8	0.0	21.2	73.2	8.8	113.2
Caroline	3.7	0.4	0.4	42.4	0.0	5.9	52.7
Cecil	11.1	0.4	2.1	21.2	74.2	46.0	154.9
Charles	1.9	1.9	0.9	0.0	35.9	14.7	55.1
Dorchester	3.7	3.3	0.9	21.2	50.7	1.8	81.5
Harford	9.5	2.3	0.9	0.0	94.1	113.2	219.9
Kent	3.7	1.5	0.9	63.6	29.4	2.9	102.0
Prince George's	14.7	2.1	9.2	0.0	0.0	404.8	430.8
Queen Anne's	6.3	2.5	1.7	0.0	84.2	0.9	95.6
Somerset	5.6	9.7	0.0	21.2	7.9	5.9	50.2
St. Mary's	3.0	3.0	0.4	0.0	70.6	5.9	82.9
Talbot	1.9	2.3	0.9	63.6	87.8	5.9	162.2
Wicomico	1.0	0.4	0.9	63.6	2.7	0.6	69.1
Worcester	1.5	4.5	1.3	0.0	299.0	0.8	307.0
New Jersey	257.4	46.6	35.0	598.8	2,104.4	2,340.6	5,382.8
Atlantic	16.7	0.4	0.9	127.1	335.4	6.9	487.3
Bergen	19.0	3.6	2.8	21.2	0.0	226.9	273.5
Burlington	4.3	0.4	1.7	42.4	0.0	123.7	172.5
Camden	13.9	0.4	1.3	21.2	40.6	106.0	183.6
Cape May	6.0	26.2	1.3	84.8	323.9	14.7	456.8
• •	3.7	1.2				16.7	
Cumberland			4.5	42.4	32.1		100.5
Essex	16.4	1.7	1.3	0.0	162.9	115.6	298.0
Gloucester	21.4	1.1	4.3	0.0	0.0	37.8	64.6
Hudson	2.9	2.0	0.4	5.5	371.3	519.3	901.5
Middlesex	8.3	1.0	0.3	21.2	41.5	567.6	639.9
Monmouth	20.8	1.6	3.0	84.8	331.1	38.4	479.7
Ocean	17.1	2.3	2.9	84.8	354.5	11.4	472.9
Passaic	28.2	1.9	1.3	0.0	0.0	260.1	291.5
Salem	0.0	1.1	0.0	0.0	22.5	14.7	38.3
Somerset	13.7	0.2	8.3	0.0	0.0	83.5	105.7
Union	64.9	1.2	0.9	63.6	88.6	197.5	416.7
Pennsylvania	14.6	10.2	1.8	84.8	1,116.9	380.3	1,608.5
Bucks	3.2	2.8	0.5	0.0	0.0	117.7	124.2
Delaware	6.7	3.2	0.4	0.0	33.8	17.3	61.4
Philadelphia	4.8	4.1	0.9	84.8	1,083.2	245.3	1,423.0
Virginia	219.2	87.7	17.6	1,457.6	1,791.4	1,219.2	4,792.6
Accomack	9.3	5.4	0.0	0.0	28.4	2.9	46.0
Alexandria	5.6	0.0	0.0	0.0	0.0	17.6	23.1
Arlington	3.7	0.8	1.3	0.0	0.0	20.5	26.3
Caroline	3.7	0.0	0.4	0.0	0.0	10.9	15.0
Charles City	1.9	0.0	1.3	0.0	0.0	0.0	3.1
Chesapeake	49.3	0.8	1.7	254.3	0.0	122.8	428.8
Chesterfield	4.3	1.5	1.7	0.0	0.0	28.9	36.4
Colonial Heights	0.0	0.0	0.0	0.0	0.0	2.9	2.9
Essex	1.9	0.4	0.0	0.0	11.3	0.0	13.5
Fairfax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fairfax City	1.9	0.4	0.0	0.0	0.0	0.0	2.2
Falls Church	0.0	0.0	0.0	0.0	0.0	2.9	2.9
Franklin City	0.0	0.4	0.0	0.0	0.0	2.9	3.3
Fredericksburg	1.9	0.0	0.0	0.0	0.0	2.9	4.8
Gloucester	4.5	0.2	0.4	84.8	25.5	2.9	118.2
Hampton	7.4	4.1	0.0	21.2	143.8	29.3	205.9
Hanover	1.9	0.8	1.3	0.0	0.0	9.5	13.4
Henrico	5.6	1.0	0.9	0.0	0.0	28.7	36.2
			0.9		0.0		
Hopewell	0.0	0.0		0.0		2.9	2.9
Isle of Wight	7.4	0.0	0.4	0.0	14.9	5.9	28.6
James City	3.7	0.8	0.4	0.0	115.7	2.9	123.5

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Region – State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total
5 				(Million Dollars)		
King and Queen	3.7	0.4	0.0	21.2	0.0	0.0	25.
King George	0.0	0.0	0.9	0.0	9.7	0.0	10.
King William	1.6	0.4	0.4	0.0	0.0	2.9	5.
Lancaster	0.4	12.4	0.4	42.4	17.2	8.8	81.
Manassas	0.0	0.0	0.0	0.0	0.0	0.0	0.
Manassas Park	0.0	0.0	0.0	0.0	0.0	0.0	0.
Mathews	0.8	1.5	0.0	21.2	2.3	8.8	34
Middlesex	0.6	1.1	0.0	84.8	9.3	5.9	101
New Kent	5.6	0.4	0.0	0.0	0.0	2.9	8
Newport News	7.4	3.0	0.4	36.5	172.5	48.1	267
Norfolk	9.3	1.2	0.0	35.1	240.0	552.9	838
Northampton	5.6	1.4	0.0	0.0	8.8	0.0	15
Northumberland	20.4	0.4	0.4	21.2	4.2	2.9	49
Petersburg	1.9	0.4	0.0	0.0	0.0	8.8	11
Poquoson	1.9	1.1	0.0	0.0	1.8	2.9	7
Portsmouth	20.7	1.1	0.0	644.4	0.0	26.8	693
Prince George	0.0	0.0	0.0	0.0	0.0	72.3	72
Prince William	3.7	0.8	2.6	0.0	169.9	5.8	182
Richmond	3.7	0.0	0.0	0.0	3.9	0.0	7
Richmond City	2.4	3.0	0.4	0.0	0.0	27.7	33
Spotsylvania	0.7	0.4	0.4	0.0	0.0	44.6	46
Stafford	3.7	0.0	0.0	0.0	49.4	8.8	61
Suffolk	0.6	1.9	1.3	0.0	50.6	46.4	100
Surry	0.0	0.0	0.0	0.0	0.7	0.0	(
Virginia Beach	5.6	2.4	0.4	169.5	580.5	23.8	782
Westmoreland	1.9	37.0	0.0	0.0	7.3	2.9	49
Williamsburg	1.9	0.0	0.0	0.0	0.0	2.9	4
York	1.9	1.1	0.0	21.2	123.7	14.7	162
tlantic - South	630.4	105.2	56.9	858.4	8,153.8	4,505.2	14,309
Florida	502.2	45.9	39.8	558.0	4,641.4	3,856.8	9,644
Baker	1.2	0.0	0.0	0.0	0.0	3.6	4
Bradford	0.0	0.3	0.6	2.8	0.0	0.0	3
Brevard	15.8	0.8	0.4	42.4	511.0	18.3	588
Broward	54.3	6.2	8.6	54.4	1,169.6	383.9	1,677
Clay	27.2	0.0	2.0	8.5	0.0	21.8	59
Duval	54.8	4.5	1.6	144.4	282.7	560.5	1,048
Flagler	3.6	0.0	0.0	5.6	43.9	18.2	, 71
Indian River	5.6	2.1	0.6	11.3	110.2	25.4	155
Lake	8.5	0.6	0.9	2.8	0.0	24.3	37
Martin	19.6	1.5	0.9	62.1	213.5	1.8	299
Miami-Dade	176.5	17.4	5.8	62.1	0.0	2,409.8	2,671
Nassau	0.0	0.6	0.0	0.0	156.1	0.6	157
Okeechobee	3.6	0.3	1.2	2.8	0.0	10.9	18
Orange	39.6	0.9	1.6	34.9	0.0	196.9	274
Osceola	7.3	0.3	0.9	0.0	0.0	25.4	33
Palm Beach	46.5	4.6	8.2	67.8	1,393.3	58.0	1,578
Putnam	1.0	0.6	1.2	2.8	0.0	3.6	1,5,6
Seminole	8.2	1.5	2.0	5.6	0.0	2.2	19
St. Johns	20.3	1.8	1.4	8.5	270.4	40.0	342
St. Lucie	4.0	1.5	1.4	16.6	82.0	50.9	156
Volusia	4.5	0.6	0.5	22.6	408.7	0.6	437
Georgia	4.5 19.7	5.9	3.2	22.6 22.6	408.7 499.8	357.9	908
_	0.0	0.0	0.3	0.0	499.8 0.0	0.0	908
Brantley							
Bryan	2.4	0.3	0.0	2.8	16.4	3.6	25
Camden	1.2	0.3	0.6	5.6	12.5	10.9	31
Charlton	0.0	0.0	0.0	0.0	0.0	0.0	400
Chatham	8.5	2.1	0.3	5.6	198.5	270.2	48!
Effingham	0.0	0.3	0.9	0.0	0.0	18.6	19

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Region – State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total			
negion State - County	(Million Dollars)									
Glynn	0.3	0.9	0.3	0.0	256.5	32.7	290			
Liberty	3.6	0.3	0.6	2.8	3.9	14.5	25			
Long	0.0	0.0	0.0	0.0	0.0	0.0	0			
McIntosh	1.2	1.8	0.3	5.6	12.0	3.6	24			
Wayne	2.4	0.0	0.0	0.0	0.0	3.6	6			
North Carolina	58.6	42.3	8.2	118.6	845.0	83.6	1,156			
Beaufort	1.0	12.8	0.0	13.5	24.0	0.0	51			
Bertie	0.0	0.3	0.3	0.0	2.7	3.6	6			
Brunswick	11.5	0.8	0.0	3.1	62.5	2.6	80			
Camden	1.2	0.0	0.0	0.0	1.3	0.0	2			
Carteret	3.6	1.4	0.6	50.8	97.7	43.6	197			
Chowan	6.1	0.3	0.0	8.7	7.5	0.0	22			
Craven	1.1	1.2	0.6	2.8	67.4	7.1	80			
Currituck	0.5	0.6	0.3	0.0	11.9	3.6	16			
Dare	3.2	2.1	0.3	26.8	132.0	0.0	164			
Gates	0.0	0.0	0.3	0.0	0.0	3.6	10-			
Hertford	0.0	0.0	0.0	0.0	0.0	3.6				
Hyde	1.2	10.7	0.0	0.0	9.0	0.0	20			
New Hanover										
	18.1	1.8	4.1	1.5	242.7	4.9	27			
Onslow	5.9	0.3	0.3	0.0	131.1	7.3	14			
Pamlico	0.8	7.4	0.0	5.6	5.1	0.0	1			
Pasquotank	1.5	1.2	0.0	0.0	27.5	3.6	3:			
Pender	0.6	0.6	1.4	5.6	13.5	0.0	2			
Perquimans	2.4	0.0	0.0	0.0	3.3	0.0				
Tyrrell	0.0	0.9	0.0	0.0	0.7	0.0				
Washington	0.0	0.0	0.0	0.0	5.2	0.0				
South Carolina	50.0	11.2	5.8	159.3	2,167.6	207.0	2,60			
Beaufort	4.6	1.8	0.6	5.6	396.6	36.3	44.			
Berkeley	4.8	0.0	0.3	5.6	0.0	19.5	30			
Charleston	23.6	4.7	2.6	116.2	777.9	136.9	1,06			
Colleton	3.6	0.3	0.3	2.8	3.1	3.6	1			
Dorchester	6.3	0.0	0.6	17.6	0.0	3.2	2			
Georgetown	3.6	2.7	0.3	5.6	98.9	0.3	11			
Horry	2.2	1.1	1.2	5.6	876.9	7.1	89			
Jasper	1.2	0.6	0.0	0.0	14.1	0.0	1			
ulf of Mexico - East	479.3	88.6	1,109.9	1,014.2	6,838.9	1,379.6	10,91			
Alabama	23.8	29.3	547.9	325.5	332.9	248.8	1,50			
Baldwin	2.6	2.1	42.9	10.2	214.8	7.0	27			
Mobile	21.2	27.2	505.0	315.3	118.1	241.8	1,22			
Florida	447.2	53.0	463.9	629.6	6,183.5	1,115.6	8,89			
Alachua	0.0	0.9	12.3	14.6	0.0	73.0	10			
Bay	6.2	3.9	18.4	97.4	367.6	3.1	49			
Calhoun	2.9	0.0	12.3	15.4	0.0	0.0	3			
Charlotte	9.7	1.8	18.4	5.1	132.8	14.7	18			
Citrus	14.5	0.9	12.3	5.1	45.3	9.8	8			
Collier	8.8	1.2	36.8	5.1	601.5	3.8	65			
Columbia	2.9	0.0	0.0	0.0	0.0	9.8	1			
DeSoto	0.0	0.0	0.0	0.0	0.0	0.3	_			
Dixie										
	0.0	1.0	0.0	0.0	2.6	0.0	24			
Escambia	1.4	4.4	7.6	6.7	309.1	19.5	34			
Franklin	1.4	1.3	0.0	0.0	23.8	2.5	2			
Gadsden	1.4	0.3	18.4	0.0	0.0	0.0	2			
Gilchrist	0.0	0.0	0.0	0.0	0.0	2.5				
Glades	0.0	0.0	0.0	5.1	0.0	0.0				
Gulf	0.0	0.8	0.0	0.0	9.6	0.0	1			
Hamilton	0.0	0.0	6.1	0.0	0.0	0.0				
Hardee	4.3	0.0	6.1	0.0	0.0	0.0	10			
Hendry	1.4	0.5	12.3	5.1	0.0	0.0	19			

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Region – State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total
negren cuare county				(Million Dollars	:)		
Hernando	2.9	0.8	18.4	0.0	6.7	12.3	41.0
Highlands	1.8	0.0	6.1	15.4	0.0	4.9	28.2
Hillsborough	213.9	2.7	5.1	56.3	766.9	149.7	1,194.6
Holmes	1.4	0.5	12.3	0.0	0.0	0.0	14.2
Jackson	0.0	0.3	12.3	0.0	0.0	7.4	19.9
Jefferson	1.4	0.0	0.0	0.0	2.4	0.0	3.8
Lafayette	0.0	0.0	0.0	5.1	0.0	0.0	5.3
Lee	26.5	3.5	0.3	12.5	644.9	5.3	693.0
Leon	15.5	1.0	24.5	5.1	0.0	1.5	47.
Levy	0.0	1.1	12.3	5.1	14.3	2.5	35.
Liberty	0.0	0.0	0.0	0.0	0.0	0.0	0.
Madison	0.0	0.0	0.0	0.0	0.0	0.0	0.
Manatee	2.9	1.0	12.3	92.2	259.7	4.7	372.
Marion	1.6	0.3	61.3	15.4	0.0	17.1	95.
Monroe	4.1	9.1	6.1	30.7	584.5	3.0	637.
Okaloosa	0.1	3.1	24.5	10.2	339.2	1.5	378.
Pasco	21.9	2.6	30.7	20.5	93.0	22.1	190.
Pinellas	32.1	4.6	2.4	148.5	1,185.8	435.1	1,808.
Polk	24.4	1.6	55.2	10.2	0.0	280.9	372.
Santa Rosa	15.9	0.5	0.6	10.2	102.4	4.9	134.
Sarasota	11.1	0.8	0.3	1.5	481.2	16.8	511.
Sumter	4.3	0.5	0.0	5.1	0.0	2.5	12.
Suwannee	0.0	0.3	6.1	0.0	0.0	0.0	6.
Taylor	1.4	0.3	0.0	10.2	14.1	0.0	26.
Wakulla	1.4	0.5	0.0	0.0	11.5	0.0	13.
Walton	7.2	0.8	6.1	10.2	184.7	4.9	214.
Washington	0.0	0.0	6.1	5.1	0.0	0.0	11.3
Mississippi	8.3	6.3	98.1	59.1	322.4	15.1	509.
Hancock	2.9	0.3	36.8	5.1	21.7	1.5	68.3
Harrison	2.7	4.7	12.3	30.7	195.5	6.5	252.
Jackson	2.7	1.3	49.1	23.2	105.3	7.1	188.
Gulf of Mexico - West	1,075.3	134.9	74,703.1	1,696.2	2,223.1	3,643.3	83,475.9
Louisiana	510.0	80.6	11,799.1	1,172.2	1,169.2	1,635.4	16,366.
Calcasieu	188.4	0.8	175.6	7.7	0.0	8.1	380.
Cameron	7.4	1.4	104.4	0.0	0.0	15.2	128.
Iberia	6.1	2.1	613.5	58.9	37.5	21.2	739.
Jefferson	62.5	4.1	281.1	527.9	147.3	252.3	1,275.
Lafourche	22.2	2.1	791.0	92.1	12.5	539.9	1,459.
Livingston	0.4	0.2	23.9	23.0	0.0	3.0	50.
Orleans	34.0	6.8	5,466.5	3.5	790.5	242.8	6,544.
Plaquemines	30.4	4.6	952.9	14.0	14.1	99.8	1,115.
St. Bernard	11.1	2.8	179.3	38.4	18.6	15.3	265.
St. Charles	26.0	0.9	12.7	15.4	0.0	26.9	81.
St. James	7.4	0.7	102.5	7.7	0.0	12.7	130.
St. John the Baptist	7.4	1.1	46.3	15.4	0.0	35.5	105.
St. Martin	0.0	8.6	64.2	7.7	0.0	3.0	83.
St. Mary	22.2	1.4	1,050.4	161.2	9.6	150.0	1,394.
St. Tammany	10.3	1.1	111.4	23.0	15.9	5.7	167.
Tangipahoa	14.8	2.1	1.9	0.0	0.0	79.1	97.
Terrebonne	48.1	8.3	913.8	153.5	105.2	97.7	1,326.
Vermilion	11.1	31.4	907.7	23.0	18.0	27.3	1,018.
Texas	565.3	54.3	62,904.0	524.0	1,053.9	2,007.9	67,109.
Aransas	11.1	0.1	34.0	15.4	24.3	15.2	100.
Brazoria	37.1	1.8	147.8	30.7	9.6	27.3	254.
- · · · - · · · · ·	42.2	1.8	179.3	1.2	13.6	3.9	241.
Calhoun		1.0					
Calhoun Cameron		4.5	0.7	117.5	75.1	52.0	751
Calhoun Cameron Chambers	1.7 3.7	4.5 3.2	0.7 16.2	117.5 7.7	75.1 4.5	52.0 12.1	251. 47.

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Region – State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total
Region State County				(Million Dollars)		
Harris	309.3	8.2	58,820.2	129.1	142.4	1,664.4	61,073.5
Jackson	11.1	1.4	9.8	0.0	5.1	3.0	30.4
Jefferson	56.8	12.1	35.8	76.8	44.8	53.1	279.4
Kenedy	0.0	0.0	51.2	0.0	0.0	0.0	51.2
Kleberg	0.0	0.0	461.1	7.7	26.5	0.0	495.3
Liberty	3.7	0.7	10.4	0.0	0.0	6.1	20.8
Matagorda	11.1	5.5	7.7	46.1	24.9	12.1	107.4
Nueces	29.7	0.7	714.9	23.0	356.9	35.0	1,160.2
Orange	3.7	0.4	44.2	26.1	0.0	6.8	81.1
Refugio	0.0	0.4	54.9	0.0	3.9	0.0	59.2
San Patricio	11.1	0.0	58.7	0.5	33.0	21.2	124.6
Victoria	3.7	0.0	2,228.8	23.0	0.0	1.9	2,257.4
Willacy	0.0	0.4	25.6	0.0	0.0	9.1	35.1
Pacific - Hawaii	126.9	29.2	3.3	58.2	4,582.3	356.3	5,156.3
Hawaii	126.9	29.2	3.3	58.2	4,582.3	356.3	5,156.3
Hawaii	30.8	6.2	0.3	2.6	624.5	26.2	690.5
Honolulu	65.4	20.6	0.9	52.9	2,399.1	261.5	2,800.5
Kalawao	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kauai	11.5	1.2	0.0	0.0	388.7	29.4	430.8
Maui	19.2	1.2	2.1	2.6	1,170.1	39.2	1,234.4
Pacific - California	970.2	140.7	1,367.7	1,240.2	14,571.0	12,505.0	30,794.9
California	970.2	140.7	1,367.7	1,240.2	14,571.0	12,505.0	30,794.9
Alameda	28.8	0.6	4.7	35.4	796.7	691.2	1,557.3
Contra Costa	131.9	1.0	53.4	35.4	304.6	36.7	563.1
Del Norte	3.4	8.1	3.6	11.8	20.7	7.3	54.9
Humboldt	1.1	6.7	10.7	35.4	103.7	4.4	162.0
Los Angeles	249.6	62.9	323.9	12.7	1,834.8	7,070.7	9,554.7
Marin	31.1	2.1	21.4	2.0	344.0	73.0	473.6
Mendocino	6.9	8.3	3.6	11.8	54.0	6.3	90.8
Monterey	13.8	7.1	21.4	0.0	637.2	32.7	712.2
Napa	5.7	0.3	17.8	0.0	0.0	13.5	37.4
Orange	42.3	1.1	38.0	141.7	1,627.2	1,666.7	3,517.1
Sacramento	22.0	1.0	13.9	0.0	0.0	151.3	188.3
San Diego	224.1	16.0	104.7	788.5	2,769.8	1,153.3	5,056.4
San Francisco	11.5	11.9	21.4	11.8	3,076.4	42.4	3,175.3
San Joaquin	9.4	0.3	36.5	11.8	0.0	352.0	410.1
San Luis Obispo	47.2	0.3	7.3	11.8	234.0	0.5	301.5
San Mateo	10.3	4.8	9.6	11.8	1,034.3	26.4	1,097.3
Santa Barbara	15.5	1.0	67.0	11.8	523.5	350.5	969.4
Santa Clara	46.5	1.0	32.1	11.8	279.7	465.1	837.1
Santa Cruz	0.0	2.8	7.1	23.6	259.0	19.6	312.1
Solano	15.6	2.8 0.7	18.7	11.8	121.8	69.8	238.4
	8.1	0.7	2.6	23.6	177.0	25.3	230.4
Sonoma							
Ventura	41.9	0.8	532.4	35.4	372.7	86.7	1,070.0
Yolo	3.4	0.0	16.0	0.0	0.0	159.3	178.8
Pacific - Northwest	363.5	475.6	255.4	4,017.3	2,784.3	2,002.9	9,898.9
Oregon	54.4	35.3	87.2	409.4	321.7	109.0	1,017.0
Benton	0.8	3.2	5.1	0.0	0.0	4.4	13.5
Clatsop	5.4	6.8	0.0	76.8	76.4	26.5	191.9
Columbia	1.8	0.6	12.8	51.2	17.3	13.3	96.9
Coos	5.4	3.5	2.6	76.8	60.1	3.3	151.6
Curry	1.8	4.8	2.6	25.6	23.5	8.8	67.1
Douglas	6.8	0.9	14.2	76.8	5.7	8.8	113.2
Lane	1.2	4.0	29.6	25.6	18.9	6.7	86.1
Lincoln	7.2	6.9	2.6	51.2	105.5	17.7	191.0
Polk	0.5	0.0	5.1	0.0	0.0	0.2	5.9
Tillamook	3.6	2.0	0.0	25.6	14.2	4.4	49.8
Washington	19.3	0.6	12.8	0.0	0.0	13.6	46.3

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Pagian State Count	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total			
Region – State - County	(Million Dollars)									
Yamhill	0.6	1.9	0.0	0.0	0.0	1.1	3.!			
Washington	309.1	440.3	168.2	3,607.9	2,462.6	1,893.9	8,881.9			
Clallam	9.0	7.0	7.7	127.9	62.4	22.1	236.3			
Grays Harbor	1.7	34.1	2.6	127.9	52.6	44.2	263.3			
Island	3.6	1.9	5.1	127.9	45.5	4.4	188.			
Jefferson	3.6	2.9	7.7	204.7	33.5	8.8	261.2			
King	177.6	268.8	22.6	202.0	1,381.0	1,330.0	3,381.9			
Kitsap	9.4	2.9	12.8	1,548.6	0.0	70.7	1,644.4			
Mason	5.4	19.9	2.6	25.6	39.0	22.1	114.0			
Pacific	0.0	25.6	0.0	51.2	18.2	4.4	99.			
Pierce	27.8	18.3	41.0	58.5	266.7	286.6	698.			
San Juan	1.8	1.3	2.6	0.0	44.0	4.4	54.0			
Skagit	3.2	1.3	5.1	614.1	84.9	39.8	748.			
Snohomish	43.0	31.7	43.3	33.2	223.4	18.0	392.			
Thurston	11.4	0.3	5.1	51.2	0.0	22.5	90.			
Wahkiakum	0.0	0.6	0.0	0.0	0.9	0.0	1.			
Whatcom	11.6	23.7	10.2	435.0	210.7	15.8	706.			
Pacific - Alaska	216.7	502.6	7,223.3	0.0	723.4	65.2	8,731.			
Alaska	216.7	502.6	7,223.3	0.0	723.4	65.2	8,731.			
Aleutians East	0.0	16.5	0.0	0.0	2.3	1.4	20.			
Aleutians West	0.0	141.7	49.5	0.0	0.6	0.4	192.			
	73.6	30.7	4,626.3	0.0	469.5	31.2	5,231.			
Anchorage										
Bethel	0.0	4.7	0.0	0.0	0.2	0.0	4.			
Bristol Bay	0.0	52.7	0.0	0.0	3.1	1.2	57.			
Dillingham	0.0	7.1	98.9	0.0	0.2	0.6	106.			
Haines	0.0	11.8	49.5	0.0	2.4	1.2	64.			
Hoonah-Angoon	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Juneau	98.9	7.1	49.5	0.0	51.8	2.4	209.			
Kenai Peninsula	0.0	12.3	504.1	0.0	73.7	3.6	593.			
Ketchikan Gateway	14.7	35.4	49.5	0.0	11.0	6.1	116.			
Kodiak Island	3.7	103.8	0.0	0.0	13.6	1.8	122.			
Lake and Peninsula	0.0	7.1	0.0	0.0	3.1	0.0	10.			
Matanuska-Susitna	3.7	2.4	544.2	0.0	57.5	1.8	609.			
Nome	3.7	0.0	49.5	0.0	0.8	0.6	54.			
North Slope	0.0	0.0	955.1	0.0	1.7	0.6	957.			
Northwest Arctic	0.0	0.0	0.0	0.0	1.5	1.2	2.			
Prince of Wales-	0.0	0.0	0.0	0.0	1.5	1.2	۷.			
	0.0	0.0	0.0	0.0	0.0	0.0	0			
Outer Ketchikan	0.0	0.0	0.0	0.0	0.0	0.0	0.			
Sitka	7.4	23.6	0.0	0.0	5.8	1.2	38.			
Valdez-Cordova	7.4	33.9	197.9	0.0	22.4	9.7	271.			
Wade Hampton	3.7	7.1	0.0	0.0	0.0	0.0	10.			
Wrangell-										
Petersburg	0.0	0.0	0.0	0.0	0.0	0.0	0.			
Yakutat City and										
Borough	0.0	4.7	49.5	0.0	2.3	0.0	56.			
Great Lakes - West	158.5	76.9	358.7	28.3	5,627.1	1,569.0	7,818.			
Illinois	51.0	31.1	80.2	6.4	3,477.1	1,085.0	4,730.			
Cook	48.3	29.8	80.0	4.6	3,223.4	1,004.1	4,390.			
Lake	2.7	1.3	0.1	1.8	253.6	80.9	340.			
Indiana	34.3	0.7	14.1	0.0	141.2	6 7.2	257.			
La Porte	0.6	0.0	4.6	0.0	53.5	22.7	81.			
Lake	32.4	0.7	6.4	0.0	31.2	21.8	92.			
Porter	1.3	0.0	3.1	0.0	56.5	22.7	83.			
Michigan	50.4	28.2	209.8	11.0	1,065.6	206.8	1,571			
Alcona	0.6	0.0	0.0	0.0	0.8	0.0	1.			
Alger	0.0	1.3	0.0	0.0	4.5	2.8	8			
Allegan	5.6	0.0	7.7	2.4	33.8	3.4	52			
Alpena	0.0	0.0	6.2	0.0	9.6	5.7	21.			

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Pogion State County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total			
Region – State - County	(Million Dollars)									
Antrim	2.5	0.0	3.1	0.0	5.2	0.0	10			
Arenac	0.6	0.7	7.7	0.0	2.0	0.0	11			
Baraga	0.0	0.0	4.6	0.0	2.9	0.0	7			
Bay	3.2	0.0	7.7	0.6	76.1	11.3	98			
Benzie	0.6	0.0	1.5	0.0	4.2	5.7	12			
Berrien	8.3	0.0	7.7	0.6	70.3	5.9	9:			
Charlevoix	1.2	0.7	3.1	0.6	12.4	5.7	2			
Cheboygan	1.9	3.3	1.5	1.2	20.4	10.0	3			
Chippewa	0.6	4.6	3.1	0.0	8.2	17.0	3			
Delta	0.6	1.3	3.1	1.2	24.3	14.1	4			
Emmet	1.3	2.6	4.6	0.0	40.0	5.7	5			
Gogebic	0.0	0.7	0.0	0.0	7.1	0.0				
Grand Traverse	2.4	0.7	72.8	0.0	140.9	8.5	22			
Houghton	0.0	0.0	3.1	0.0	6.8	2.8	1			
Huron	1.0	0.7	4.6	0.0	4.8	5.7	1			
losco	0.6	0.7	0.0	0.0	10.7	0.0	1			
Keweenaw	0.6	0.0	1.5	0.0	6.1	8.5	1			
Leelanau	0.6	0.7	6.2	0.0	29.0	2.8	3			
Luce	0.0	0.0	0.0	0.0	3.4	0.0	_			
Mackinac	0.6	2.1	4.6	0.0	61.8	8.5	7			
Manistee	0.6	0.7	7.7	0.6	10.8	0.0	2			
Marquette	0.0	0.7	3.1	0.0	62.3	5.7	7			
Mason	0.6	1.3	0.0	0.0	15.2	11.3	2			
Menominee	0.6	0.7	1.5	0.0	7.5	8.5	1			
Muskegon	2.6	0.7	3.1	0.6	47.6	14.1	6			
Oceana	0.6	0.0	3.1	0.0	7.1	5.1	1			
Ontonagon	0.6	0.0	0.0	0.0	0.2	0.0				
Ottawa	2.5	0.7	4.5	1.4	55.8	7.0	7			
Presque Isle	0.0	0.7	1.5	0.0	3.5	2.8				
Saginaw	1.3	2.0	4.6	0.0	168.0	5.0	18			
Sanilac	1.9	0.0	9.2	0.0	4.3	0.0	1			
Schoolcraft	0.6	0.7	1.5	0.0	3.2	0.0				
St. Clair	3.2	0.7	7.7	1.8	80.1	14.1	10			
Tuscola	1.3	0.0	7.7	0.0	0.2	5.7	1			
Van Buren	0.6	0.7	0.0	0.0	14.6	3.6	1			
Minnesota	2.5	3.3	12.3	0.0	151.6	6.0	17			
Carlton	0.0	0.0	3.1	0.0	0.0	5.7				
Cook	0.0	0.7	0.0	0.0	25.7	0.0	2			
Lake	0.0	1.3	0.0	0.0	16.3	0.0	1			
St. Louis	2.5	1.3	9.2	0.0	109.6	0.4	12			
Wisconsin	20.3	13.7	42.4	10.9	791.5	204.0	1,08			
Ashland	0.6	0.0	0.0	0.0	14.9	5.7	2			
Bayfield	0.0	2.6	0.0	0.0	11.4	2.8	1			
Brown	1.8	0.0	6.2	1.8	112.4	30.2	15			
Door	3.9	2.6	3.1	2.4	68.7	8.5	8			
Douglas	1.9	0.7	0.0	1.2	31.7	33.9	6			
Iron	0.6	0.0	1.5	0.0	0.0	0.0	O			
Kenosha	0.0	0.0	4.6	0.0	37.4	8.8	5			
Kewaunee	1.3	0.0	3.1	0.0	5.2	0.0	1			
			8.6							
Manitowoc	1.3	1.3		1.2	36.9	5.7	5			
Marinette	0.0	0.0	0.0	1.8	16.6	5.7	2			
Milwaukee	5.1	2.6	3.1	0.6	311.6	64.2	38			
Oconto	0.6	0.0	3.1	1.8	4.4	2.8	1			
Ozaukee	0.6	1.3	1.5	0.0	49.7	5.7	5			
Racine	2.5	0.0	3.1	0.0	27.4	19.8	5			
Sheboygan	0.0	2.0 34.8	4.6 106.0	0.0 0.0	63.1 2,231.6	10.3 930.8	8 3,37			
reat Lakes - East	74.9						2 2 7			

Table A2. Gross Domestic Product for major ocean sectors in U.S. coastal regions, states and counties in 2009

Region – State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	Total		
	(Million Dollars)								
Macomb	15.6	1.2	1.3	0.0	81.6	129.5	229.1		
Monroe	0.7	1.2	1.4	0.0	57.5	37.4	98.1		
Wayne	5.7	1.0	6.4	0.0	228.3	211.9	453.3		
New York	28.2	23.3	55.8	0.0	861.8	180.9	1,150.0		
Cayuga	2.2	0.0	1.4	0.0	15.1	1.8	20.5		
Chautauqua	0.7	0.6	33.0	0.0	122.9	0.6	157.8		
Erie	11.2	2.3	2.7	0.0	329.5	74.7	420.4		
Franklin	0.7	0.6	0.0	0.0	17.3	1.9	20.5		
Jefferson	5.0	0.0	4.2	0.0	30.8	0.6	40.6		
Monroe	6.3	18.1	4.2	0.0	111.3	57.4	197.4		
Niagara	0.4	1.2	0.7	0.0	128.3	8.5	139.0		
Orleans	0.0	0.0	1.4	0.0	0.9	1.7	4.0		
Oswego	0.7	0.6	5.2	0.0	30.3	1.9	38.8		
St. Lawrence	0.7	0.0	2.1	0.0	63.1	25.6	91.5		
Wayne	0.1	0.0	0.7	0.0	12.4	6.2	19.4		
Ohio	22.6	6.4	26.6	0.0	946.1	356.6	1,358.3		
Ashtabula	1.4	0.0	4.0	0.0	42.1	8.0	55.5		
Cuyahoga	9.5	1.2	9.9	0.0	333.3	203.5	557.4		
Erie	0.7	1.2	0.0	0.0	158.1	2.5	162.4		
Lake	2.2	0.6	6.4	0.0	191.2	8.0	208.3		
Lorain	3.6	0.0	1.4	0.0	33.6	3.0	41.6		
Lucas	0.8	2.3	2.1	0.0	124.6	29.5	159.3		
Ottawa	2.2	1.2	0.7	0.0	63.3	25.2	92.5		
Sandusky	0.7	0.0	1.4	0.0	0.0	9.7	11.8		
Wood	1.4	0.0	0.7	0.0	0.0	67.3	69.4		
Pennsylvania	2.2	1.7	14.5	0.0	56.3	14.6	89.2		
Erie	2.2	1.7	14.5	0.0	56.3	14.6	89.2		
Grand Total	5,395.8	2,532.4	85,324.0	13,320.0	76,195.2	35,317.5	218,084.8		

Source: National Ocean Economics Program, Ocean Economy Dataset.

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars))		
Atlantic_North	2,060	3,022	140	2,441	66,528	12,103	86,29
Connecticut	65	40	0	0	3,689	1,086	4,87
Fairfield	8	26	0	0	1,744	621	2,39
Middlesex	38	5	0	0	354	132	52
New Haven	10	4	0	0	849	330	1,19
New London	9	5	0	0	742	2	75
Maine	68	251	15	0	2,844	721	3,90
Cumberland	32	35	2	0	1,187	423	1,67
Hancock	2	139	1	0	366	7	51
Kennebec	2	11	1	0	0	11	2
Knox	2	5	1	0	215	47	27
Lincoln	12	13	1	0	164	59	24
Penobscot	0	2	3	0	0	16	24
Sagadahoc	2	17	1	0	0	10	3
Waldo		17			78	59	
	2		1	0			15
Washington	0	12	2	0	46	24	8
York	12	7	4	0	787	65	87
Massachusetts	291	1,850	37	324	8,077	5,553	16,13
Barnstable	27	45	4	3	1,959	87	2,12
Bristol	17	1,059	5	62	264	686	2,09
Dukes	1	12	0	17	249	30	30
Essex	25	512	14	84	970	98	1,70
Middlesex	83	16	3	50	591	3,610	4,35
Nantucket	0	1	0	33	194	0	22
Norfolk	100	28	3	17	778	220	1,14
Plymouth	21	19	5	8	592	316	96
Suffolk	17	158	2	50	2,480	506	3,21
New Hampshire	10	27	10	0	859	186	1,09
Rockingham	10	26	6	0	734	164	94
Strafford	0	2	4	0	125	21	15
New York	1,585	690	78	2,117	47,935	4,015	56,41
Bronx	49	70	1	, 75	384	. 84	, 66
Dutchess	18	5	4	75	763	176	1,04
Kings	283	351	3	15	1,823	104	2,57
Nassau	58	41	4	225	1,434	187	1,94
New York	758	85	9	0	36,922	688	38,46
Orange	13	4	6	0	834	55	91
Putnam	25	2	0	75	125	22	24
Queens	96	23	30	0	675	355	1,17
Richmond	82	3		225	712	165	
Rockland			0		652		1,18
	25	8	0	75		151	91
Suffolk	96	70	9	1,201	2,540	1,869	5,78
Ulster	6	6	6	75 	644	45	78
Westchester	77	21	5	75 -	426	113	71
Rhode Island	40	164	0	0	3,125	543	3,87
Bristol	5	13	0	0	157	24	19
Kent	2	8	0	0	631	48	68
Newport	10	5	0	0	893	144	1,05
Providence	10	4	0	0	890	183	1,08
Washington	13	134	0	0	554	144	84
Atlantic_Middle	2,787	1,228	231	10,047	30,607	21,044	65,94
Delaware	55	28	0	0	1,769	538	2,39
Kent	8	5	0	0	320	88	42
New Castle	30	11	0	0	589	341	97
Sussex	17	12	0	0	860	109	99
Maryland	716	309	0	3,546	8,879	4,445	17,89

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

legion - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
-				(Million Dollars)			
Anne Arundel	151	51	0	1,640	2,183	405	4,43
Baltimore	128	28	0	386	548	312	1,40
Baltimore City	123	18	0	72	2,524	971	3,70
Calvert	38	5	0	96	292	39	47
Caroline	15	2	0	193	0	26	23
Cecil	46	2	0	96	296	205	64
Charles	8	11	0	0	143	65	22
Dorchester	15	20	0	96	202	8	34
Harford	39	14	0	0	375	505	93
Kent	15	9	0	289	117	13	44
Prince George's	60	13	0	0	0	1,806	1,87
Queen Anne's	26	15	0	0	335	4	38
Somerset	23	59	0	96	31	26	23
St. Mary's	12	18	0	0	281	26	33
•		14	0	289	350	26	
Talbot	8						68
Wicomico	4	2	0	289	11	3	30
Worcester	6	27	0	0	1,191	3	1,22
New Jersey	1,056	260	147	0	8,372	9,666	19,50
Atlantic	68	2	4	0	1,334	28	1,43
Bergen	78	20	12	0	0	937	1,0
Burlington	18	2	7	0	0	511	5:
Camden	57	4	5	0	162	438	6
Cape May	24	146	5	0	1,289	61	1,5
Cumberland	15	7	19	0	128	69	23
Essex	67	10	5	0	648	478	1,2
Gloucester	88	6	18	0	0	156	20
Hudson	12	11	2	0	1,477	2,145	3,6
Middlesex	34	6	1	0	165	2,344	2,5!
Monmouth	86	9	13	0	1,317	158	1,5
Ocean	70	13	12	0	1,410	47	1,5
Passaic	116	10	5	0	0	1,074	1,20
Salem	0	6	0	0	89	61	1
Somerset	56	1	35	0	0	345	4:
Union	266	7	4	0	352	816	1,4
Pennsylvania	60	36	8	0	4,451	1,622	6,1
Bucks	13	10	2	0	0	502	5:
Delaware	27	12	2	0	135	74	2
Philadelphia	20	15	4	0	4,317	1,046	5,4
Virginia	899	594	76	6,501	7,136	4,772	19,9
Accomack	38	37	0	0,301	113	11	19,9
Alexandria	23	0	0	0	0	69	1:
	25 15	5					
Arlington			6	0	0	80	10
Caroline	15	0	2	0	0	43	(
Charles City	8	0	6	0	0	0	
Chesapeake	202		7	1,134	0	481	1,8
Chesterfield	18	10	7	0	0	113	1
Colonial Heights	0	0	0	0	0	11	
Essex	8	3	0	0	45	0	!
Fairfax	0	0	0	0	0	0	
Fairfax City	8	3	0	0	0	0	
Falls Church	0	0	0	0	0	11	
Franklin City	0	3	0	0	0	11	
Fredericksburg	8	0	0	0	0	11	
Gloucester	18	1	2	378	101	11	5
Hampton	30	28	0	95	573	115	8
		5	•				Ū

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars)			
Henrico	23	7	4	0	0	112	14
Hopewell	0	0	0	0	0	11	1
Isle of Wight	30	0	2	0	59	23	11
James City	15	5	2	0	461	11	49
King and Queen	15	3	0	95	0	0	11
King George	0	0	4	0	39	0	4
King William	7	3	2	0	0	11	2
Lancaster	2	84	2	189	68	34	37
Manassas	0	0	0	0	0	0	
Manassas Park	0	0	0	0	0	0	
Mathews	3	10	0	95	9	34	15
Middlesex	2	8	0	378	37	23	44
New Kent	23	3	0	0	0	11	3
Newport News	30	20	2	163	687	188	1,09
Norfolk	38	8	0	157	956	2,164	3,32
Northampton	23	10	0	0	35	2,104	3,32
Northumberland	23 84	3	2	95	17	11	21
			0				23
Petersburg	8	3		0	0	34	
Poquoson	8	8	0	0	7	11	3 0 0
Portsmouth	85	8	0	2,874	0	105	3,07
Prince George	0	0	0	0	0	283	28
Prince William	15	5	11	0	677	23	73
Richmond	15	0	0	0	16	0	3
Richmond City	10	20	2	0	0	108	14
Spotsylvania	3	3	2	0	0	175	18
Stafford	15	0	0	0	197	34	24
Suffolk	3	13	6	0	202	181	40
Surry	0	0	0	0	3	0	
Virginia Beach	23	16	2	756	2,312	93	3,20
Westmoreland	8	251	0	0	29	11	29
Williamsburg	8	0	0	0	0	11	1
York	8	8	0	95	493	57	66
Atlantic_South	2,417	626	26	2,881	28,490	17,624	52,06
_ Florida	1,925	269	0	2,242	16,206	15,265	35,90
Baker	5	0	0	0	0	14	1
Bradford	0	2	0	11	0	0	1
Brevard	61	5	0	170	1,784	73	2,09
Broward	208	36	0	219	4,084	1,519	6,06
Clay	104	0	0	34	0	86	22
Duval	210	26	0	580	987	2,218	4,02
	14			23		72	26
Flagler		0	0		153		
Indian River	21	12	0	45	385	101	56
Lake	33	3	0	11	0	96	14
Martin	75	9	0	250	745	7	1,08
Miami-Dade	677	102	0	249	0	9,538	10,50
Nassau	0	3	0	0	545	3	5!
Okeechobee	14	2	0	11	0	43	•
Orange	152	5	0	140	0	779	1,07
Osceola	28	2	0	0	0	101	13
Palm Beach	178	27	0	272	4,865	229	5,5
Putnam	4	3	0	11	0	14	;
Seminole	31	9	0	23	0	9	-
Schillold				34	944	158	1,22
St. Johns	78	10	0	34	277		
St. Johns							
	78 15 17	10 9 3	0	67 91	286 1,427	201	5: 1,54

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars)			
Brantley	0	0	2	0	0	0	
Bryan	9	1	0	0	57	13	8
Camden	5	1	5	0	43	39	9.
Charlton	0	0	0	0	0	0	
Chatham	33	7	2	0	687	970	1,69
Effingham	0	1	7	0	0	67	7.
Glynn	1	3	2	0	887	117	1,01
Liberty	14	1	5	0	13	52	8
Long	0	0	0	0	0	0	0.
McIntosh	5	6	2	0	42	13	6
	9	0	0	0	0	13	2
Wayne							
North Carolina	225	303	0	0	2,942	317	3,78
Beaufort	4	92	0	0	84	0	179
Bertie	0	2	0	0	9	14	2
Brunswick	44	6	0	0	218	10	27
Camden	5	0	0	0	4	0	
Carteret	14	10	0	0	340	165	530
Chowan	23	2	0	0	26	0	5
Craven	4	8	0	0	235	27	27
Currituck	2	4	0	0	41	14	6:
Dare	12	15	0	0	460	0	48
Gates	0	0	0	0	0	14	1
Hertford	0	0	0	0	0	14	1
Hyde	5	77	0	0	31	0	11
New Hanover	69	13	0	0	845	19	94
Onslow	23	2	0	0	456	28	509
Pamlico	3	53	0	0	18	0	7:
Pasquotank	6	8	0	0	96	14	12
Pender	2	4	0	0	47	0	5:
Perquimans	9	0	0	0	12	0	2
Tyrrell	0	6	0	0	2	0	
Washington	0	0	0	0	18	0	18
South Carolina	192	35	0	639	7,613	756	9,23
Beaufort	17	6	0	23	1,393	133	1,57
Berkeley	19	0	0	23	0	71	1137
Charleston	90	15	0	467	2,732	500	3,80
Colleton		13	_				
	14 24		0	11 71	11 0	13	5
Dorchester		0	0			12	10
Georgetown	14	9	0	23	347	1	39
Horry	9	4	0	23	3,080	26	3,14
Jasper	5	2	0	0	50	0	5
GOM_East	1,779	441	0	3,454	22,437	4,879	32,98
Alabama	88	140	0	1,159	1,088	801	3,27
Baldwin	10	10	0	36	702	23	78
Mobile	79	130	0	1,123	386	778	2,49
Florida	1,660	270	0	2,295	20,294	4,029	28,54
Alachua	0	5	0	53	0	264	32
Bay	23	20	0	355	1,206	11	1,61
Calhoun	11	0	0	56	0	0	6
Charlotte	36	9	0	19	436	53	55
Citrus	54	5	0	19	149	35	26
Collier	33	6	0	19	1,974	14	2,04
Columbia	11	0	0	0	0	35	, 4
DeSoto	0	0	0	0	0	1	•
Dixie	0	5	0	0	8	0	1
Escambia	5	22	0	24	1,014	70	1,13

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars)			
Franklin	5	7	0	0	78	9	9
Gadsden	5	1	0	0	0	0	
Gilchrist	0	0	0	0	0	9	
Glades	0	0	0	19	0	0	1
Gulf	0	4	0	0	32	0	3
Hamilton	0	0	0	0	0	0	_
Hardee	16	0	0	0	0	0	1
Hendry	5	3	0	19	0	0	2
Hernando	11	4	0	0	22	44	8
Highlands	7	0	0	56	0	18	8
Hillsborough	, 794	14	0	205	2,517	541	4,07
Holmes	7 <i>5</i> 4	3	0	0	2,317	0	4,07
							-
Jackson	0	1	0	0	0	27	2
Jefferson	5	0	0	0	8	0	1
Lafayette	0	0	0	19	0	0	1
Lee	98	18	0	46	2,116	19	2,29
Leon	58	5	0	19	0	5	8
Levy	0	6	0	19	47	9	3
Liberty	0	0	0	0	0	0	
Madison	0	0	0	0	0	0	
Manatee	11	5	0	336	852	17	1,22
Marion	6	1	0	56	0	62	12
Monroe	15	46	0	112	1,918	11	2,10
Okaloosa	0	16	0	37	1,113	5	1,17
Pasco	81	13	0	75	305	80	55
Pinellas	119	23	0	541	3,892	1,571	6,14
Polk	90	8	0	37	0	1,014	1,15
Santa Rosa	59	3	0	37	336	18	45
Sarasota	41	4	0	5	1,579	61	1,69
Sumter	16	3	0	19	0	9	
Suwannee	0	1	0	0	0	0	
Taylor	5	1	0	37	46	0	g
Wakulla	5	3	0	0	38	0	4
Walton	27	4	0	37	606	18	69
Washington	0	0	0	19	0	0	1
Mississippi	31	31	0	0	1,055	49	1,16
Hancock	11	1	0	0	71	5	2,10
Harrison	10	23	0	0	639	21	69
Jackson	10	25 6	0	0	344	23	38
		619					
GOM_West	3,363		168,306	1,646	6,085	10,711	190,73
Louisiana	1,595	359	26,590	0	3,202	4,441	36,18
Calcasieu	589	3	396	0	0	22	1,01
Cameron	23	6	235	0	0	41	30
Iberia	19	9	1,383	0	103	58	1,57
Jefferson	195	18	633	0	404	685	1,93
Lafourche	70	10	1,783	0	34	1,466	3,36
Livingston	1	1	54	0	0	8	(
Orleans	106	30	12,319	0	2,165	659	15,28
Plaquemines	95	20	2,147	0	39	271	2,57
St. Bernard	35	13	404	0	51	41	54
St. Charles	81	4	29	0	0	73	18
St. James	23	3	231	0	0	34	29
St. John the Baptist	23	5	104	0	0	96	22
St. Martin	0	38	145	0	0	8	19
St. Mary	70	6	2,367	0	26	407	2,8
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Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars)			
Tangipahoa	46	9	4	0	0	215	27.
Terrebonne	150	37	2,059	0	288	265	2,80
Vermilion	35	140	2,045	0	49	74	2,34
Texas	1,768	261	141,716	1,646	2,882	6,270	154,54
Aransas	35	1	77	48	66	47	27
Brazoria	116	8	333	96	26	85	66
Calhoun	132	8	404	4	37	12	59
Cameron	5	22	2	369	205	163	76
Chambers	12	15	37	24	12	38	13
Galveston	91	64	6	61	791	265	1,27
Harris	967	39	132,515	406	390	5,197	139,51
Jackson	35	7	22	0	14	9	8
Jefferson	178	58	81	241	123	166	84
Kenedy	0	0	115	0	0	0	11
Kleberg	0	0	1,039	24	73	0	1,13
Liberty	12	3	23	0	0	19	5
Matagorda	35	26	17	145	68	38	32
Nueces	93	3	1,611	72	976	109	2,86
Orange	12	2	99	82	0	21	21
Refugio	0	2	124	0	11	0	13
San Patricio	35	0	132	2	90	66	32
Victoria	12	0	5,021	72	0	6	5,11
Willacy	0	2	58	0	0	28	8
Pacific_HI	270	65	0	0	9,814	824	10,97
– Hawaii	270	65	0	0	9,814	824	10,97
Hawaii	65	14	0	0	1,338	60	1,47
Honolulu	139	46	0	0	5,138	605	5,92
Kalawao	0	0	0	0	0	0	,
Kauai	25	3	0	0	832	68	92
Maui	41	3	0	0	2,506	91	2,64
Pacific_CA	3,707	644	0	5,376	52,967	52,455	115,14
California	3,707	644	0	5,376	52,967 52,967	52,455	115,14
Alameda	110	3	0	154	2,896	2,899	6,06
Contra Costa	504	5	0	154	1,107	154	1,92
Del Norte	13	37	0	51	75	31	20
Humboldt							
	4	31	0	154	377	18	58
Los Angeles	954	288	0	55	6,670	29,660	37,62
Marin	119	9	0	9	1,250	306	1,69
Mendocino	26	38	0	51	196	26	33
Monterey	53	33	0	0	2,316	137	2,53
Napa	22	2	0	0	0	57	8
Orange	162	5	0	614	5,915	6,991	13,68
Sacramento	84	5	0	0	0	635	72
San Diego	856	73	0	3,418	10,068	4,838	19,25
San Francisco	44	55	0	51	11,183	178	11,51
San Joaquin	36	2	0	51	0	1,477	1,56
San Luis Obispo	180	3	0	51	850	2	1,08
San Mateo	39	22	0	51	3,760	111	3,98
Santa Barbara	59	5	0	51	1,903	1,470	3,48
Santa Clara	178	9	0	51	1,017	1,951	3,20
Santa Cruz	0	13	0	102	942	82	1,13
Solano	59	3	0	51	443	293	85
Sonoma	31	2	0	102	644	106	88
Jonoma							
Vontura	160	/	^				
Ventura Yolo	160 13	4 0	0 0	154 0	1,355 0	364 668	2,03 68

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars)			
Oregon	177	148	0	1,339	983	385	3,03
Benton	3	13	0	0	0	16	3
Clatsop	18	29	0	251	233	94	62
Columbia	6	3	0	167	53	47	27
Coos	18	15	0	251	184	12	47
Curry	6	20	0	84	72	31	21
Douglas	22	4	0	251	18	31	32
Lane	4	17	0	84	58	24	18
Lincoln	23	29	0	167	323	62	60
Polk	2	0	0	0	0	1	
Tillamook	12	8	0	84	43	16	16
Washington	63	3	0	0	0	48	11
Yamhill	2	8	0	0	0	4	1
Washington	1,004	1,840	0	12,094	7,519	5,966	28,42
Clallam	29	29	0	429	190	70	74
Grays Harbor	6	142	0	429	161	139	87
Island	12	8	0	429	139	14	60
Jefferson	12	12	0	686	102	28	84
King	577	1,123	0	677	4,217	4,190	10,78
-		1,123	0				
Kitsap	30			5,191	0	223	5,45
Mason	18	83	0	86	119	70	37
Pacific	0	107	0	172	55	14	34
Pierce	90	77	0	196	814	903	2,08
San Juan	6	5	0	0	134	14	15
Skagit	10	5	0	2,058	259	125	2,45
Snohomish	140	132	0	111	682	57	1,12
Thurston	37	1	0	172	0	71	28
Wahkiakum	0	3	0	0	3	0	
Whatcom	38	99	0	1,458	643	50	2,28
Pacific_AK	562	2,205	16,539	, O	1,899	173	21,37
Alaska	562	2,205	16,539	0	1,899	173	21,37
Aleutians East	0	72	0	0	6	4	8
Aleutians West	0	622	113	0	1	1	73
Anchorage	191	135	10,593	0	1,232	83	12,23
_							•
Bethel	0	21	0	0	0	0	2
Bristol Bay	0	231	0	0	8	3	24
Dillingham	0	31	227	0	0	2	26
Haines	0	52	113	0	6	3	17
Hoonah-Angoon	0	0	0	0	0	0	
Juneau	257	31	113	0	136	6	54
Kenai Peninsula	0	54	1,154	0	193	9	1,41
Ketchikan Gateway	38	155	113	0	29	16	35
Kodiak Island	10	456	0	0	36	5	50
Lake and Peninsula	0	31	0	0	8	0	3
Matanuska-Susitna	10	10	1,246	0	151	5	1,42
Nome	10	0	113	0	2	2	12
North Slope	0	0	2,187	0	4	2	2,19
Northwest Arctic Prince of Wales-	0	0	0	0	4	3	
Outer Ketchikan	0	0	0	0	0	0	
Sitka	19	104	0	0	15	3	14
Valdez-Cordova	19	149	453	0	59	26	70
Wade Hampton	10	31	0	0	0	0	4
Wrangell-Petersb.	0	0	0	0	0	0	
Yakutat City & Brgh.	0	21	113	0	6	0	14
		~ 1			0		

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
				(Million Dollars)			
Illinois	182	144	241	0	11,694	3,622	15,88
Cook	172	138	241	0	10,841	3,352	14,74
Lake	10	6	0	0	853	270	1,13
Indiana	123	0	0	0	475	217	81
La Porte	2	0	0	0	180	73	25
Lake	116	0	0	0	105	70	29
Porter	5	0	0	0	190	73	26
Michigan	180	84	631	42	3,576	813	5,32
Alcona	2	0	0	0	3	0	
Alger	0	4	0	0	15	11	3
Allegan	20	0	23	9	113	13	17
Alpena	0	0	19	0	32	22	-
Antrim	9	0	9	0	17	0	3
Arenac	2	2	23	0	7	0	3
Baraga	0	0	14	0	10	0	
Bay	11	0	23	2	256	44	3:
Benzie	2	0	5	0	14	22	•
Berrien	30	0	23	2	236	23	3
Charlevoix	4	2	9	2	42	22	;
Cheboygan	7	10	5	5	69	39	13
Chippewa	2	14	9	0	28	67	1
Delta	2	4	9	5	82	56	1
Emmet	5	8	14	0	134	22	18
Gogebic	0	2	0	0	24	0	:
Grand Traverse	8	2	219	0	473	33	7.
Houghton	0	0	9	0	23	11	
Huron	4	2	14	0	16	22	
losco	2	0	0	0	36	0	;
Keweenaw	2	0	5	0	20	33	(
Leelanau	2	2	19	0	97	11	1
Luce	0	0	0	0	11	0	
Mackinac	2	6	14	0	207	33	20
Manistee	2	2	23	2	36	0	
Marquette	0	2	9	0	209	22	24
Mason	2	4	0	0	51	44	10
Menominee	2	2	5	0	25	33	
Muskegon	9	2	9	2	160	55	2
Oceana	2	0	9	0	24	20	
Ontonagon	2	0	0	0	1	0	
Ottawa	9	2	14	5	187	28	2
Presque Isle	0	2	5	0	12	11	;
Saginaw	5	6	14	0	564	20	60
Sanilac	7	0	28	0	14	0	•
Schoolcraft	2	2	5	0	11	0	
St. Clair	11	2	23	7	269	56	3
Tuscola	5	0	23	0	1	22	!
Van Buren	2	2	0	0	49	14	_ (
Minnesota	9	10	0	0	472	25	5:
Carlton	0	0	0	0	0	23	
Cook	0	2	0	0	80	0	8
Lake	0	4	0	0	51	0	
St. Louis	9	4	0	0	341	2	3!
Wisconsin	72	52	0	40	2,655	747	3,5
Ashland	2	0	0	0	50	21	
Bayfield	0	10	0	0	38	10	
Brown	6	0	0	7	377	111	50

Table A3. Total Gross Domestic Product contribution by ocean-related sectors in U.S. coastal regions, states and counties in 2009

Region - State - County	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transport- ation	Total All Sectors
,				(Million Dollars)			
Door	14	10	0	9	230	31	294
Douglas	7	2	0	4	106	124	244
Iron	2	0	0	0	0	0	2
Kenosha	0	0	0	0	125	32	158
Kewaunee	5	2	0	0	17	0	24
Manitowoc	5	5	0	4	124	21	159
Marinette	0	0	0	7	56	21	83
Milwaukee	18	10	0	2	1,045	235	1,310
Oconto	2	0	0	7	15	10	34
Ozaukee	2	5	0	0	167	21	195
Racine	9	0	0	0	92	72	173
Sheboygan	0	7	0	0	212	38	257
Great_Lakes_East	271	122	309	0	7,535	3,486	11,724
Michigan	79	10	26	0	1,239	1,452	2,806
Macomb	56	3	4	0	275	496	835
Monroe	3	3	4	0	194	143	347
Wayne	20	3	18	0	770	812	1,624
New York	102	88	167	0	2,910	691	3,958
Cayuga	8	0	4	0	51	7	70
Chautauqua	3	2	99	0	415	2	521
Erie	41	9	8	0	1,113	285	1,455
Franklin	3	2	0	0	58	7	70
Jefferson	18	0	13	0	104	2	137
Monroe	23	68	13	0	376	219	699
Niagara	2	4	2	0	433	32	474
Orleans	0	0	4	0	3	7	14
Oswego	3	2	16	0	102	7	130
St. Lawrence	3	0	6	0	213	98	320
Wayne	0	0	2	0	42	24	68
Ohio	82	19	75	0	3,196	1,290	4,662
Ashtabula	5	0	11	0	142	29	188
Cuyahoga	34	4	28	0	1,126	736	1,928
Erie	3	3	0	0	534	9	549
Lake	8	2	18	0	646	29	702
Lorain	13	0	4	0	113	11	141
Lucas	3	7	6	0	421	107	543
Ottawa	8	3	2	0	214	91	318
Sandusky	3	0	4	0	0	35	42
Wood	5	0	2	0	0	243	251
Pennsylvania	8	5	41	0	190	54	298
Erie	8	5	41	0	190	54	298
Grand Total	18,961	11,249	186,422	39,360	253,736	135,073	644,803

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Atlantic - North	25,585	21,751	41%	0.52	0.01	37,009	45%	305
Connecticut	1,496	1,822	-18%	0.07	0.39			
Fairfield	736	776	-33%	0.61	0.00	354	-52%	490
Construction	2	12	-79%	0.61	0.07			
Living Resources	9	14	-33%	0.29	0.06			
Minerals		4						
Ship & Boat Building		1						
Tourism & Recreation	544	581	-5%	0.05	0.45			
Transportation	180	176	-64%	0.50	0.01	0	-100%	523
Middlesex	122	122	18%	0.74	0.00	174	43%	318
Construction	12	14	10,0	0.01	0.82		,	010
Living Resources Minerals				0.01	0.02			
Ship & Boat Building	444	110	70/	0.61	0.00	122	200/	42.0
Tourism & Recreation	111	110	7%	0.61	0.00	132	20%	436
Transportation	265	3	20/	0.77	0.02	24	450/	460
New Haven	365	393	-3%	0.32	0.04	311	-15%	460
Construction	3	6	-62%	0.26	0.08	_		
Living Resources Minerals Ship & Boat Building	1	3	-54%	0.41	0.02	0	-100%	523
Tourism & Recreation	265	292	-4%	0.21	0.11			
	96	91	-4 <i>%</i> 8%	0.21	0.11			
Transportation New London	273	531	8%	0.03	0.59			
			8%					
Construction	3	9	CE0/	0.27	0.16			
Living Resources	2	6	-65%	0.22	0.11			
Minerals		11		0.06	0.75			
Ship & Boat Building	36	35		0.10	0.54			
Tourism & Recreation	232	491	-6%	0.01	0.79			
Transportation	1	12		0.04	0.62			
Maine	1,534	1,704	-4%	0.03	0.60			
Cumberland	532	469	30%	0.86	0.00	707	33%	381
Construction	10	10	33%	0.12	0.25			
Living Resources Minerals	8	21	-56%	0.05	0.46			
Ship & Boat Building	6	15	-64%	0.68	0.00	0	-100%	523
Tourism & Recreation	370	333	46%	0.89	0.00	546	47%	284
Transportation	138	90	23%	0.09	0.33			
Hancock	136	153	6%	0.00	0.85			
Construction	1	1		0.10	0.48			
Living Resources Minerals		17		0.48	0.04	0		
Ship & Boat Building	19	43		0.98	0.01	0	-100%	523
Tourism & Recreation	114	127	5%	0.01	0.72			
Transportation	2	1		0.97	0.01	5	131%	54
Kennebec Construction	4	41	-90%	0.07	0.51			
Living Resources Minerals Ship & Boat Building		0		0.57	0.24			
Snip & Boat Building Tourism & Recreation		Г4		0.00	0.00	126		
	4	51		0.96	0.00	120		
Transportation	4	4	00/	0.01	0.73			
Knox Construction	79	85	9%	0.01	0.73	2	40007	
Living Resources	1	19	-91%	0.39	0.02	0	-100%	523

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Minerals								
Ship & Boat Building	11	14		0.01	0.86			
Tourism & Recreation	67	65	12%	0.58	0.00	79	17%	44
Transportation								
Lincoln	54	36	7125%	0.77	0.00	131	142%	4
Construction		1		0.28	0.36			
Living Resources	3	3	309%	0.21	0.11			
Minerals								
Ship & Boat Building		20						
Tourism & Recreation	51	42		0.72	0.00	97	90%	13
Transportation		1		0.83	0.09			
Penobscot	5	90	-95%	0.46	0.04	0	-100%	52
Construction Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation		96		0.66	0.01	130		
Transportation	5	5	46%	0.17	0.27			
Sagadahoc		19		0.38	0.10			
Construction		2						
Living Resources		1		0.01	0.88			
Minerals								
Ship & Boat Building		25						
Tourism & Recreation		23		0.27	0.48			
Transportation								
Waldo	25	16	78%	0.42	0.02	46	84%	15
Construction								
Living Resources		4		0.56	0.15			
Minerals								
Ship & Boat Building	1	1		0.98	0.01	0	-100%	52
Tourism & Recreation	24	21	113%	0.93	0.00	39	60%	22
Transportation		3		0.10	0.33			
Washington	17	20	-29%	0.23	0.10			
Construction								
Living Resources	3	6	-76%	0.83	0.00	0	-100%	52
Minerals								
Ship & Boat Building		2		0.81	0.00	0		
Tourism & Recreation	14	14	14%	0.09	0.35			
Transportation		0						
York	681	824	-17%	0.39	0.02	542	-20%	46
Construction		1		0.27	0.65			
Living Resources	2	3	-41%	0.23	0.10			
Minerals		_			0.20			
Ship & Boat Building	413	592	-35%	0.60	0.00	188	-54%	49
Tourism & Recreation	245	224	36%	0.89	0.00	321	31%	39
Transportation	21	20	33,3	0.71	0.36	322	32,3	33
Massachusetts	4,473	3,938	36%	0.86	0.00	5,645	26%	41
Barnstable	646	610	34%	0.60	0.00	803	24%	42
Construction	0-10	8	3-70	0.03	0.68	303	770	74
Living Resources	11	7	247%	0.70	0.00	23	119%	7
Minerals	11	,	Z+1/0	0.70	0.00	25	113/0	,
Ship & Boat Building	1	1						
Tourism & Recreation	612	584	34%	0.63	0.00	776	27%	41
	22	13	50%	0.63	0.00	//0	2/70	41
Transportation Pristol						064	010/	1.0
Bristol	531	359	227%	0.85	0.00	964	81%	16

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Construction	5	4	94%	0.25	0.12			
Living Resources Minerals	250	196 9	216%	0.57	0.00	482	92%	12
Ship & Boat Building	17	20		0.02	0.84			
Tourism & Recreation	83	62	88%	0.63	0.00	103	25%	41
Transportation	176	96	382%	0.77	0.00	341	94%	12
Dukes	81	57	90%	0.57	0.00	114	41%	32
Construction	0	0		0.06	0.70			
Living Resources Minerals Ship & Boat Building	3	3		0.14	0.53			
Tourism & Recreation Transportation	78	56	83%	0.52	0.01	107	38%	35
Essex	462	494	9%	0.14	0.21			
Construction	462 8	494	-65%	0.14	0.21			
Living Resources	121	119	23%	0.26	0.09	149	23%	42
Minerals	5	10	2370	0.09	0.47	143	2370	72
Ship & Boat Building	3	1		0.80	0.02	12		
Tourism & Recreation	303	318	14%	0.23	0.09			
Transportation	25	41	-35%	0.22	0.10			
Middlesex	1,141	937	18%	0.05	0.47			
Construction	25	76	-84%	0.78	0.00	0	-100%	52
Living Resources	4	3		0.44	0.22			
Minerals	1	10	-79%	0.00	0.98			
Ship & Boat Building		4						
Tourism & Recreation	185	129	218%	0.66	0.00	305	65%	20
Transportation	926	719	24%	0.11	0.27			
Nantucket	61	73	8%	0.04	0.52			
Construction								
Living Resources Minerals Ship & Boat Building	0	1		0.82	0.09			
Tourism & Recreation Transportation	61	72	7%	0.03	0.54			
Norfolk	330	261	149%	0.78	0.00	574	74%	17
Construction	30	25	365%	0.37	0.03	59	96%	12
Living Resources		4		0.97	0.01	21		
Minerals		2		0.93	0.01	0		
Ship & Boat Building								
Tourism & Recreation	243	158	286%	0.87	0.00	455	87%	14
Transportation	56	76	-11%	0.08	0.36			
Plymouth	279	220	148%	0.82	0.00	555	99%	11
Construction	6	8	-10%	0.25	0.08			
Living Resources	4	6		0.00	0.96			
Minerals		25		0.15	0.75			
Ship & Boat Building	2	4		0.78	0.12		/	
Tourism & Recreation	185	154	75%	0.85	0.00	300	62%	21
Transportation	81	70	=0/	0.21	0.22			
Suffolk	942	926	5%	0.03	0.60	^		
Construction	27	67		0.68	0.00	0	4500/	_
Living Resources	37	23		0.78	0.02	97	159%	2
Minerals		5		0.95	0.15			
Ship & Boat Building Tourism & Recreation	775	694	25%	0.22	0.11			
	775 130	694 164	-25%	0.22 0.22	0.11			
Transportation	130	104	-29%	0.22	0.11			

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
New Hampshire	334	351	-8%	0.06	0.43			
Rockingham	288	308	-11%	0.04	0.52			
Construction	3	6	-92%	0.28	0.08			
Living Resources		45		0.40	0.05	0		
Minerals	2	3		0.96	0.14			
Ship & Boat Building								
Tourism & Recreation	229	209	21%	0.29	0.06			
Transportation	54	63	10%	0.00	0.98			
Strafford	46	47	21%	0.47	0.01	61	32%	390
Construction		3						
Living Resources Minerals								
Ship & Boat Building Tourism & Recreation	20	42	11%	0.19	0.16			
	39 7	42 5	146%	0.19	0.16	12	75%	173
Transportation New York	16,661	13,007	61%	0.73 0.52	0.00 0.01	26,765	61%	226
Bronx	15,001	206	-12%	0.03	0.54	20,703	01%	220
Construction	139	8	-12/0	0.03	0.34			
Living Resources	17	9	100%	0.31	0.06			
Minerals	17	3	10070	0.51	0.00			
Ship & Boat Building								
Tourism & Recreation	120	154	3%	0.01	0.81			
Transportation	22	39	-60%	0.23	0.10			
Dutchess	286	250		0.77	0.05			
Construction								
Living Resources								
Minerals	1	1		0.71	0.07			
Ship & Boat Building	220	220		0.20	0.26			
Tourism & Recreation	238	228		0.39	0.26			
Transportation	47 772	52 546	113%	0.00	0.00	1 110	45%	302
Kings Construction	772 85	24	115%	0.90 0.72	0.00	1,119 177	45% 107%	302 97
Living Resources	85	46	206%	0.72	0.03	149	76%	170
Minerals	65	40	200%	0.73	0.00	149	70%	170
Ship & Boat Building	4	3		0.52	0.03	11	159%	30
Tourism & Recreation	569		126%					
Transportation	28	424 61	-67%	0.85 0.88	0.00	930	63% -100%	214 523
Nassau	526	620	-22%	0.38	0.03	430	-18%	461
Construction	17	32	34%	0.06	0.42	430	1070	401
Living Resources	10	16	-45%	0.38	0.03	1	-88%	517
Minerals	1	2	1370	0.87	0.02	0	-100%	523
Ship & Boat Building	_	_		0.07	0.02	· ·	20075	020
Tourism & Recreation	448	422	41%	0.64	0.00	606	35%	368
Transportation	50	149	-85%	0.67	0.00	0	-100%	523
New York	11,964	9,869	73%	0.97	0.00	17,687	48%	281
Construction	229	79	718%	0.43	0.02	243	6%	456
Living Resources	21	46	-70%	0.88	0.00	0	-100%	523
Minerals	3	10		0.22	0.35			
Ship & Boat Building								
Tourism & Recreation	11,529	9,532	76%	0.97	0.00	17,295	50%	270
Transportation	183	206	-28%	0.05	0.47	,		
Orange .	280	130	1200%	0.74	0.00	602	115%	81
Construction	4	4	119%	0.42	0.02	8	105%	101
Living Resources	1	1	82%	0.10	0.34			
Minerals								

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egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Ship & Boat Building								
Tourism & Recreation	260	208		0.54	0.10			
Transportation	15	21	-24%	0.02	0.63			
Putnam	39	25	3829%	0.69	0.00	93	138%	49
Construction								
Living Resources		1		0.64	0.20			
Minerals								
Ship & Boat Building								
Tourism & Recreation	39	32	3829%	0.94	0.00	83	112%	90
Transportation		9		0.19	0.39			
Queens	350	465	-19%	0.20	0.15			
Construction	29	55		0.86	0.00	0	-100%	523
Living Resources	6	10	-72%	0.93	0.00	0	-100%	52
Minerals	10	10		0.36	0.40			
Ship & Boat Building	_3	•						
Tourism & Recreation	211	315	-37%	0.36	0.04	24	-89%	51
Transportation	95	95	19%	0.08	0.38	2-1	23,0	31
Richmond	292	275	66%	0.30	0.06			
Construction	25	22	0070	0.43	0.08			
Living Resources	1	0		0.45	0.60			
Minerals	1	U		0.03	0.00			
Ship & Boat Building		6		0.63	0.42			
· · · · · · · · · · · · · · · · · · ·	222		90%			330	400/	27
Tourism & Recreation		176		0.97	0.00	330	49%	27
Transportation	44	82	-25%	0.26	0.09	422	760/	4.5
Rockland	246	122	229%	0.59	0.00	432	76%	16
Construction	_	2						
Living Resources	2	2		0.03	0.64			
Minerals								
Ship & Boat Building		100	2070/			272	0.504	
Tourism & Recreation	204	133	287%	0.82	0.00	378	86%	14
Transportation	40	23	82%	0.15	0.24			
Suffolk	1,340	1,275	16%	0.00	0.83			
Construction	29	29	-23%	0.50	0.01	15	-49%	48
Living Resources	17	18	-5%	0.00	0.85			
Minerals	3	5		0.96	0.00	0	-100%	52
Ship & Boat Building		2		0.62	0.04	5		
Tourism & Recreation	793	785	31%	0.23	0.12			
Transportation	498	440	2%	0.29	0.07			
Ulster	213	126		0.78	0.00	671	215%	
Construction		0						
Living Resources		4		0.47	0.52			
Minerals		3						
Ship & Boat Building								
Tourism & Recreation	201	209		0.17	0.49			
Transportation	12	11		0.78	0.01	19	54%	24
Westchester	193	346	-49%	0.41	0.03	0	-100%	52
Construction	23	28	203%	0.00	0.91			
Living Resources	5	7	-53%	0.87	0.00	0	-100%	52
Minerals	2	2		0.95	0.01	0	-95%	52
Ship & Boat Building	_	5		0.55	0.01	J	33,3	32
Tourism & Recreation	133	273	-60%	0.55	0.01	0	-100%	52
Transportation	30	36	-3%	0.06	0.01	U	100/0	32
Rhode Island	1,087	929	-3% 53%	0.00	0.43			
Bristol	49	45	82%	0.14	0.21			
DUSTOI	49	45	0 470	0.19	0.14			

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources		0		0.05	0.77			
Minerals								
Ship & Boat Building		77						
Tourism & Recreation	49	39	82%	0.95	0.00	76	55%	245
Transportation								
Kent	199	174	72%	0.79	0.00	312	56%	240
Construction								
Living Resources	3	2		0.02	0.73			
Minerals								
Ship & Boat Building								
Tourism & Recreation	197	171	70%	0.80	0.00	301	53%	257
Transportation		11						
Newport	281	198	29%	0.21	0.12			
Construction		2		0.03	0.78			
Living Resources	1	3	-56%	0.22	0.11			
Minerals								
Ship & Boat Building	0	17		0.43	0.15			
Tourism & Recreation	279	269	30%	0.47	0.04	379	36%	362
Transportation		1						
Providence	337	300	80%	0.60	0.00	573	70%	188
Construction		18		0.01	0.82			
Living Resources	1	3	-51%	0.49	0.01	0	-100%	523
Minerals								
Ship & Boat Building								
Tourism & Recreation	278	229	111%	0.68	0.00	485	75%	173
Transportation	58	57	11%	0.01	0.77			
Washington	221	212	35%	0.74	0.00	312	41%	324
Construction	4	5	29%	0.00	0.97			
Living Resources	44	27	331%	0.66	0.00	99	126%	63
Minerals		15		0.58	0.24			
Ship & Boat Building	0	0		0.20	0.71			
Tourism & Recreation	173	174	15%	0.03	0.56			
Transportation		1		0.33	0.31			
Atlantic - Middle	13,887	11,768	34%	0.57	0.00	19,903	43%	314
Delaware	554	550	57%	0.27	0.07			
Kent	81	81	14%	0.39	0.02	99	22%	429
Construction								
Living Resources		0						
Minerals								
Ship & Boat Building								
Tourism & Recreation	81	80	14%	0.41	0.02	98	22%	432
Transportation		4		0.72	0.35			
New Castle	248	246	70%	0.22	0.10			
Construction	7	46	-55%	0.01	0.72			
Living Resources		3		0.42	0.03	0		
Minerals	1	1		0.35	0.29			
Ship & Boat Building								
Tourism & Recreation	148	124	75%	0.74	0.00	227	53%	253
Transportation	91	77	118%	0.50	0.01	159	74%	179
Sussex	225	223	66%	0.28	0.06			
Construction	4	48		0.00	1.00			
Living Resources	3	4		0.81	0.10			
Minerals	1	2		0.69	0.08			
Ship & Boat Building								
Tourism & Recreation	217	198	60%	0.77	0.00	351	62%	223

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Transportation		5		0.71	0.36			
Maryland	3,372	2,247	95%	0.74	0.00	5,319	58%	237
Anne Arundel	684	542	27%	0.35	0.03	983	44%	309
Construction	37	36	9%	0.41	0.02	52	41%	329
Living Resources	8	12	-39%	0.43	0.01	4	-49%	484
Minerals	· ·		33,0	00	0.01	·	1370	
Ship & Boat Building		5		0.55	0.04	14		
Tourism & Recreation	548	496	16%	0.56	0.01	736	34%	37!
Transportation	91	33	412%	0.57	0.01	144	59%	23:
·	243							
Baltimore		332	-37%	0.56	0.00	0	-100%	52
Construction	31	27	-16%	0.21	0.12	_		
Living Resources Minerals	5	7	-62%	0.82	0.00	0	-100%	52
Ship & Boat Building		1						
Tourism & Recreation	138	117	96%	0.09	0.36			
Transportation	70	189	-74%	0.74	0.00	0	-100%	52
Baltimore City	900	521	205%	0.79	0.00	1,641	82%	15
Construction	30	15	105%	0.06	0.44			
Living Resources Minerals	3	8	-75%	0.80	0.00	0	-100%	52
Ship & Boat Building	16	7		0.86	0.07			
Tourism & Recreation	634	314	616%	0.77	0.00	1,325	109%	g
Transportation	218	208	21%	0.71	0.00	290	33%	38
Calvert	73	45	129%	0.57	0.00	128	74%	17
Construction Living Resources Minerals Ship & Boat Building		6		0.41	0.06			
Tourism & Recreation	73	44	296%	0.85	0.00	140	92%	13
Transportation		1		0.75	0.34			
Caroline		1		0.65	0.20			
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation		0		0.88	0.22			
Transportation		O						
Cecil	120	68	200%	0.87	0.00	192	60%	22
Construction Living Resources Minerals Ship & Boat Building	120	1	20076	0.87	0.00	132	0070	22
Tourism & Recreation	74	57	85%	0.89	0.00	126	69%	19
Transportation	74 46	25	03/0	0.89	0.00	167	263%	19
Charles	36	25 29	31%	0.35	0.00	43	203%	43
Construction Living Resources	30	0	51%	0.55	0.05	45	2170	43
Minerals Ship & Boat Building								
Tourism & Recreation Transportation	36	29 1	31%	0.32	0.04	43	19%	44
Dorchester	56	79	-42%	0.19	0.13			
Construction		2		0.41	0.06			
Living Resources Minerals	3	49	-96%	0.71	0.00	0	-100%	52

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Ship & Boat Building		0		0.85	0.08			
Tourism & Recreation	51	31	374%	0.80	0.00	112	121%	70
Transportation	2	2		0.80	0.00	0	-100%	523
Harford	219	143	181%	0.84	0.00	421	92%	129
Construction	10	7	47%	0.57	0.00	14	48%	280
Living Resources	2	2	,5	0.07	0.00		.0,0	200
Minerals Ship & Boat Building	_	_						
Tourism & Recreation	94	63	103%	0.79	0.00	158	68%	197
Transportation	113	77	352%	0.79	0.00	240	112%	88
•						240	11270	00
Kent	29	27	56%	0.14	0.20			
Construction Living Resources Minerals		0						
Ship & Boat Building		0						
Tourism & Recreation Transportation	29	29	56%	0.17	0.18			
Prince George's	431	311		0.85	0.03	1,048	143%	38
Construction	15	16		0.55	0.15			
Living Resources	2	2		0.23	0.41			
Minerals	9	20		0.24	0.40			
Ship & Boat Building Tourism & Recreation								
Transportation	405	272		0.84	0.03	1,061	162%	27
Queen Anne's	94	71	254%	0.77	0.00	200	113%	87
Construction	6	8		0.20	0.26			
Living Resources Minerals Ship & Boat Building	3	7		0.57	0.08			
Tourism & Recreation	0.4	67	2170/	0.96	0.00	171	103%	104
	84	67	217%	0.86	0.00	1/1	103%	104
Transportation	1	1	1110/	0.27	0.29			
Somerset Construction	18	9	111%	0.32	0.06			
Living Resources Minerals Ship & Boat Building	10	5						
Tourism & Recreation	8	8	-5%	0.08	0.37			
Transportation		0						
St. Mary's	74	58	32%	0.34	0.04	107	45%	301
Construction	3	3	139%	0.48	0.01	5	78%	166
Living Resources Minerals	J	1	13370	0.73	0.01	0	7070	100
Ship & Boat Building								
Tourism & Recreation	71	58	29%	0.67	0.00	93	32%	388
Transportation		6		0.59	0.44			- 30
Talbot	90	75	3%	0.21	0.11			
Construction	2	3	-35%	0.20	0.15			
Living Resources Minerals	-	1	3370	0.20	0.13			
Ship & Boat Building		1						
Tourism & Recreation Transportation	88	78	5%	0.46	0.02	115	31%	397
Wicomico	4	3	170%	0.61	0.00	8	90%	133
Construction	1	1		0.55	0.09	2	22.3	
Living Resources	-	_		5.55	2.03			

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Minerals		1						
Ship & Boat Building								
Tourism & Recreation	3	3		0.59	0.07			
Transportation	1	1	-61%	0.59	0.00	0	-100%	523
Worcester	301	133	722%	0.73	0.00	651	116%	79
Construction	1	2	-36%	0.02	0.69			
Living Resources		2		0.83	0.00	0		
Minerals								
Ship & Boat Building								
Tourism & Recreation	299	140	879%	0.73	0.00	646	116%	7
Transportation	1	1						
New Jersey	4,724	4,510	4%	0.10	0.29			
Atlantic	343	324	30%	0.28	0.07			
Construction		11	00,0	0.26	0.38			
Living Resources	0	1	-31%	0.05	0.49			
Minerals	ŭ	-	31/0	0.05	0.15			
Ship & Boat Building		14		0.55	0.09			
Tourism & Recreation	335	329	33%	0.64	0.00	494	47%	28
Transportation	333 7	10	-36%	0.36	0.00	434 5	-26%	46
'	252							
Bergen		397	-37%	0.48	0.01	0	-100%	52
Construction	19	15	77%	0.22	0.13			
Living Resources	4	3	31%	0.10	0.32			
Minerals	3	5		0.65	0.10			
Ship & Boat Building								
Tourism & Recreation		238		0.63	0.06			
Transportation	227	258	33%	0.15	0.22			
Burlington	128	153	-23%	0.58	0.00	63	-51%	48
Construction	4	6	-55%	0.86	0.00	0	-100%	52
Living Resources	0	2		0.74	0.34			
Minerals								
Ship & Boat Building								
Tourism & Recreation		73		0.84	0.00	112		
Transportation	124	104	34%	0.45	0.02	148	20%	43
Camden	161	188	-18%	0.43	0.02	107	-34%	47
Construction	14	11		0.04	0.62			
Living Resources	1	2	-15%	0.03	0.61			
Minerals								
Ship & Boat Building								
Tourism & Recreation	41	45	-49%	0.36	0.04	10	-74%	50
Transportation	106	135	-8%	0.19	0.15			
Cape May	356	347	22%	0.22	0.13			
Construction	6	10	-40%	0.00	0.87			
Living Resources	26	33	24%	0.00	0.88			
Minerals	20	33	2470	0.00	0.00			
Ship & Boat Building		2						
Tourism & Recreation	324	330	24%	0.63	0.00	458	41%	32
	324		24/0				41/0	32
Transportation Cumberland	E /	3 51	210/	0.71	0.02	7 94	720/	10
	54		21%	0.35	0.04	94	73%	18
Construction	4	0	020/	0.05	0.40			
Living Resources	1	15	-93%	0.25	0.10			
Minerals	5	13		0.86	0.07			
Ship & Boat Building		_	<u>.</u>		<u> </u>			_
Tourism & Recreation	32	24	78%	0.72	0.00	46	44%	30
Transportation	17	12	66%	0.12	0.27			
Essex	297	413	-28%	0.25	0.10			

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Construction	16	22	-42%	0.08	0.38			
Living Resources	2	14	-91%	0.35	0.04	0	-100%	523
Minerals								
Ship & Boat Building								
Tourism & Recreation	163	145	51%	0.81	0.00	241	48%	283
Transportation	116	244	-55%	0.34	0.05	0	-100%	523
Gloucester	63	87	31%	0.04	0.52			
Construction	21	27		0.06	0.56			
Living Resources		57						
Minerals	4	15						
Ship & Boat Building								
Tourism & Recreation		52		0.05	0.61			
Transportation	38	35	65%	0.05	0.48			
Hudson	901	692	54%	0.51	0.01	1,465	63%	218
Construction	3	8		0.61	0.12			
Living Resources Minerals	2	2	-17%	0.37	0.04	0	-100%	523
Ship & Boat Building	6	7		0.94	0.03	0	-100%	523
Tourism & Recreation	371	304	52%	0.59	0.00	626	69%	193
Transportation	519	404	53%	0.40	0.02	784	51%	265
Mercer		29		0.76	0.01	159		
Construction		1						
Living Resources		4		0.21	0.54			
Minerals								
Transportation		26		0.70	0.02	141		
Middlesex	619	543	-4%	0.06	0.44			
Construction	8	25	4%	0.06	0.46			
Living Resources	1	1		0.11	0.46			
Minerals	0	0						
Ship & Boat Building		1						
Tourism & Recreation	41	49	3%	0.21	0.16			
Transportation	568	472	-5%	0.05	0.47			
Monmouth	392	349	36%	0.39	0.03	630	61%	225
Construction	21	24	-11%	0.11	0.29	_		
Living Resources	2	3	-49%	0.45	0.02	0	-82%	511
Minerals		2						
Ship & Boat Building		1					= 40/	
Tourism & Recreation	331	312	41%	0.69	0.00	509	54%	251
Transportation	38	36	48%	0.44	0.02	59	53%	255
Ocean	388	364	4%	0.00	0.93			
Construction	17	25	-26%	0.04	0.54			
Living Resources	2	4	6%	0.20	0.14			
Minerals	3	15		0.54	0.16			
Ship & Boat Building Tourism & Recreation	254	202	Ε0/	0.21	0.10			
Transportation	354 11	382 11	5% 20%	0.21 0.06	0.18 0.46			
Passaic	288	306	9%					
Construction	288 28	306	9% 11%	0.28 0.02	0.08 0.80			
Living Resources	20	0	1170	0.02	0.80			
Minerals		U		0.43	0.33			
Ship & Boat Building								
Tourism & Recreation		5		0.76	0.01	0		
Transportation	260	283	12%	0.70	0.01	3		
Salem	22	27	97%	0.23	0.06			
	~~	<i>_,</i>	21/0	5.55	0.00			

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	22	18	97%	0.79	0.00	38	69%	192
Transportation		16		0.78	0.05	171		
Somerset	106	73	66%	0.47	0.01	122	15%	449
Construction	14	4		0.96	0.02	32	134%	52
Living Resources	0	0		0.95	0.03	0	-100%	523
Minerals	8	10		0.10	0.60			
Ship & Boat Building								
Tourism & Recreation								
Transportation	83	67	31%	0.21	0.13			
Union	352	494	-23%	0.19	0.15			=
Construction	65	82		0.60	0.01	15	-77%	508
Living Resources	1	2	-8%	0.05	0.49			
Minerals								
Ship & Boat Building	00	101	440/	0.06	0.47			
Tourism & Recreation	89	101	-11%	0.06	0.47	0	4000/	F22
Transportation	198	338	-44%	0.48	0.01	0	-100%	523
Pennsylvania	1,522	1,182	101%	0.84	0.00	2,616	72%	186
Bucks	124	166	-24%	0.09	0.31			
Construction	3	6	0.40/	0.55	0.06			
Living Resources	3	5	84%	0.00	0.96	0	1000/	F22
Minerals	0	1		0.96	0.02	0	-100%	523
Ship & Boat Building		O.F.		0.20	0.10			
Tourism & Recreation	110	85	250/	0.38	0.10	104	F.C0/	241
Transportation	118	106	35%	0.70	0.00	184	56%	241
Delaware	61	84	-44% 13%	0.75	0.00 0.78	33	-46%	481
Construction	7 3	8 5	-13%	0.01		1	770/	F07
Living Resources Minerals	3	5	-34%	0.59	0.00	1	-77%	507
Ship & Boat Building Tourism & Recreation	34	40	27%	0.12	0.25			
	34 17	32	-75%	0.12	0.25	0	-100%	523
Transportation	1,337	931	-75% 175%	0.80	0.00	2,474	-100% 85%	149
Philadelphia Construction	1,337 5	49	1/3/0	0.80	0.00	2,474	-100%	523
Living Resources	4	10	-54%	0.75	0.00	0	-100%	523
Minerals	4	10	-5470	0.55	0.00	U	-100%	323
Ship & Boat Building		61		0.14	0.76			
Tourism & Recreation	1,083	627	303%	0.14	0.00	2,182	101%	107
Transportation	245	236	18%	0.78	0.00	353	44%	307
Virginia	3,715	3,280	23%	0.38	0.02	333	4470	307
Accomack	3,713	67	-60%	0.27	0.07	0	-100%	523
Construction	34	0	-00%	0.92	0.01	2	-100%	323
Living Resources	5	60	-93%	0.61	0.00	0	-100%	523
Minerals	5	00	-3370	0.01	0.00	O	-100%	323
Ship & Boat Building								
Tourism & Recreation	28	12	193%	0.66	0.03	40	40%	332
Transportation	20	12	100/0	0.00	0.03	40	7 ∪/0	332
Alexandria		189		0.62	0.06			
Construction		103		0.02	0.00			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation		189		0.62	0.06			

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egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Transportation Arlington		7		0.92	0.04	0		
Construction		,		0.92	0.04	U		
Living Resources		7		0.92	0.04	0		
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Caroline	11	10		0.63	0.11			
Construction								
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	11	10		0.63	0.11			
Charles City		3		0.80	0.01	12		
Construction								
Living Resources								
Minerals		4		0.66	0.40			
Ship & Boat Building								
Tourism & Recreation		1		0.77	0.12			
Transportation	22	40	200/	0.47	0.46			
Chesterfield Construction	33 4	40 8	-28% -33%	0.17 0.00	0.16 0.96			
Living Resources	4	٥	-33%	0.00	0.96			
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	29	32	-27%	0.17	0.16			
Essex	11	11	33%	0.79	0.00	16	38%	342
Construction								
Living Resources								
Minerals								
Ship & Boat Building Tourism & Recreation	11	11	33%	0.79	0.00	16	38%	342
Transportation	11	11	33%	0.79	0.00	10	3070	342
Fairfax		112		0.00	0.99			
Construction		18		0.43	0.08			
Living Resources		5		0.79	0.30			
Minerals								
Ship & Boat Building								
Tourism & Recreation		52		0.01	0.86			
Transportation		53		0.51	0.05	0		
Fairfax City Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Franklin City								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Tourism & Recreation								
Transportation			/					
Gloucester	30	25	80%	0.01	0.78			
Construction	4	5	32%	0.22	0.13			
Living Resources Minerals	0	6		0.29	0.13			
Ship & Boat Building Tourism & Recreation Transportation	25	30	91%	0.02	0.74			
Transportation Hanover	10	14	-55%	0.80	0.00	0	-100%	52
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation								
Transportation	10	14	-55%	0.80	0.00	0	-100%	52
Henrico	30	43	-50%	0.79	0.00	0	-100%	52
Construction	30	7	3070	0.95	0.14	Ü	20070	32
Living Resources	1	2		0.48	0.13			
Minerals Ship & Boat Building	-	_		0.10	0.20			
Tourism & Recreation		5		0.89	0.05			
Transportation	29	39	-41%	0.83	0.00	0	-100%	52
Isle of Wight Construction Living Resources Minerals	15	12	65%	0.88	0.00	22	47%	28
Ship & Boat Building								
Tourism & Recreation Transportation	15	12	65%	0.88	0.00	22	47%	28
James City Construction Living Resources Minerals Ship & Boat Building	116	120 1	6%	0.47	0.02	158	36%	35
Tourism & Recreation Transportation King and Queen Construction Living Resources Minerals	116	120	6%	0.46	0.02	157	36%	36
Ship & Boat Building Tourism & Recreation Transportation King George Construction Living Resources Minerals	10	5	251%	0.91	0.00	16	64%	21
Ship & Boat Building Tourism & Recreation	10	5	251%	0.91	0.00	16	64%	21
Transportation								
King William	2	1						
Construction Living Resources Minerals	2	2						

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egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Determination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank ir % change
Ship & Boat Building								
Tourism & Recreation								
Transportation		0						
Lancaster	30	17		0.01	0.74			
Construction	0	1		0.08	0.53			
Living Resources	12	12		0.03	0.64			
Minerals								
Ship & Boat Building		1		0.01	0.90			
Tourism & Recreation	17	14		0.83	0.03	24	39%	33
Transportation								
Mathews	3	2	150%	0.00	0.89			
Construction	1	1		0.32	0.19			
Living Resources		1		0.91	0.04	0		
Minerals		_				_		
Ship & Boat Building								
Tourism & Recreation	2	2	88%	0.79	0.01	3	32%	39
Transportation	_	_	3370	0.75	0.01	J	32,0	0.
Middlesex	10	8	106%	0.04	0.58			
Construction	1	1	100/0	0.02	0.75			
Living Resources	_	18		0.02	0.73			
Minerals		10						
Ship & Boat Building		2		0.70	0.16			
Tourism & Recreation	9	2 8	94%	0.70	0.16	14	53%	2!
	9	8	94%	0.80	0.01	14	53%	2:
Transportation								
New Kent								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Northampton	10	13	28%	0.01	0.81			
Construction		0						
Living Resources	1	9		0.02	0.75			
Minerals								
Ship & Boat Building								
Tourism & Recreation	9	9	10%	0.08	0.54			
Transportation								
Northumberland	5	11	-60%	0.03	0.58			
Construction		2		0.72	0.02	4		
Living Resources	0	10		0.84	0.00	0	-100%	52
Minerals								
Ship & Boat Building								
Tourism & Recreation	4	5	-61%	0.37	0.11			
Transportation								
Prince George	72	67		0.76	0.05			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	72	67		0.76	0.05			
Prince William	176	100	490%	0.74	0.00	370	111%	g
Construction	1/0	3	75070	5.74	0.00	370	111/0	-
Living Resources		4		0.78	0.31			
LIVING NESOUNCES		4		0.76	0.51			

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gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Minerals Ship & Boat Building								
Tourism & Recreation	170	96	470%	0.72	0.00	363	114%	8
Transportation			470%	0.72	0.00	303	11470	0.
Richmond	6 4	6 4		0.98	0.09			
Construction	4	4						
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation Transportation	4	4						
Richmond City	33	67	-67%	0.82	0.00	0	-100%	52
Construction	2	2	-07/0	0.02	0.00	U	-100/0	32
Living Resources	3	21	-89%	0.60	0.00	0	-100%	52
Minerals Ship & Boat Building	3	21	3370	3.00	3.00	Ü	100/0	32
Tourism & Recreation								
Transportation	28	46	-62%	0.89	0.00	0	-100%	52
Spotsylvania	45	21	32,3	0.53	0.06	Ü	20070	32
Construction	1	3		0.80	0.01	0	-100%	52
Living Resources Minerals	_	J		0.00	0.01	· ·	10070	32
Ship & Boat Building Tourism & Recreation								
Transportation	45	43		0.79	0.31			
Stafford	49	44	67%	0.85	0.00	77	56%	24
Construction Living Resources Minerals Ship & Boat Building		1						
Tourism & Recreation Transportation	49	44	67%	0.88	0.00	76	54%	24
Surry	1	1		0.28	0.47			
Construction Living Resources Minerals	_							
Ship & Boat Building								
Tourism & Recreation	1	1		0.28	0.47			
Transportation Westmoreland	44	48	-24%	0.28	0.06			
Construction Living Resources	37	52	-31%	0.51	0.01	0	-100%	52
Minerals Ship & Boat Building								
Tourism & Recreation Transportation	7	6	55%	0.77	0.00	11	47%	29
York	124	48	219%	0.19	0.28			
Construction Living Resources		0 2						
Minerals Ship & Boat Building								
Tourism & Recreation Transportation	124	54 1	219%	0.64	0.03	171	38%	34
Chesapeake City	172	160	46%	0.01	0.78			
Construction	49	51	2%	0.01	0.73			

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Living Resources Minerals								
Ship & Boat Building		30		0.92	0.00	121		
Tourism & Recreation		1		0.06	0.76			
Transportation	123	90	120%	0.04	0.49			
Colonial Heights City								
Construction								
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Falls Church City								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	2	-		0.03	0.72			
Fredericksburg City Construction	3	5		0.02	0.72			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation		2		0.17	0.49			
Transportation	3	5		0.68	0.02	0	-100%	52
Hampton City	144	55	371%	0.20	0.23			
Construction		1		0.73	0.35			
Living Resources Minerals								
Ship & Boat Building		1						
Tourism & Recreation	144	61	371%	0.58	0.03	258	79%	16
Transportation		2	3,1,0	0.50	0.00	230	, 5, 6	
Hopewell City								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation Manassas City								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Manassas Park City								
Construction								
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Newport News City	257	121	63%	0.07	0.39			

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Construction								
Living Resources Minerals		2		0.95	0.00	0		
Ship & Boat Building	36	37		0.03	0.75			
Tourism & Recreation	173	108	126%	0.76	0.13			
Transportation	48	70	-41%	0.59	0.00	6	-87%	51
Norfolk City	829	756	21%	0.28	0.06			
Construction	4	11		0.39	0.14	0	4000/	
Living Resources Minerals	1	5		0.81	0.00	0	-100%	52
Ship & Boat Building	35	140	-81%	0.47	0.01	0	-100%	52
Tourism & Recreation	240	204	58%	0.73	0.00	391	63%	21
Transportation	553	433	60%	0.20	0.13			
Petersburg City Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation		2		0.47	0.13			
Transportation		2		0.47	0.13			
Poquoson City	2	3	25%	0.04	0.57			
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation	2	3	25%	0.04	0.57			
Transportation								
Portsmouth City	692	837	11%	0.06	0.44			
Construction Living Resources Minerals	21	20 1		0.07	0.61			
Ship & Boat Building	644	750	6%	0.05	0.48			
Tourism & Recreation	044	32	070	0.62	0.01	134		
Transportation	27	53	479%	0.25	0.08	23 .		
Suffolk City	98	73	117%	0.81	0.00	165	69%	19
Construction Living Resources Minerals	1	1		0.69	0.04	0	-100%	52
Ship & Boat Building								
Tourism & Recreation	51	19	11930%	0.73	0.00	101	100%	11
Transportation	46	56	4%	0.06	0.44		2221	
Virginia Beach, City	612	467	47%	0.60	0.00	1,151	88%	13
Construction Living Resources	6 2	11 9	-39% -57%	0.06	0.41			
Minerals	2		-3 <i>17</i> 0	0.12	0.24			
Ship & Boat Building	F01	34 405	E F 0/	0.05	0.00	965	400/	2.
Tourism & Recreation Transportation	581 24	495 24	55% -14%	0.85 0.05	0.00 0.45	865	49%	27
Williamsburg City	24	188	-14%	0.03	0.45			
Construction Living Resources Minerals		100		0.22	0.34			
Ship & Boat Building Tourism & Recreation Transportation		188		0.22	0.34			

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
tlantic - South	13,466	9,802	137%	0.61	0.00	23,437	74%	178
Florida	9,152	6,748	258%	0.71	0.00	18,884	106%	98
Baker								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation Bradford								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Brevard	546	365	783%	0.76	0.00	1,180	116%	80
Construction	16	31	-47%	0.05	0.49			
Living Resources	1	2	-18%	0.01	0.78			
Minerals	0	2		1.00	0.01	0	-100%	523
Ship & Boat Building		2						
Tourism & Recreation	511	465	440/	0.78	0.01	690	35%	369
Transportation	18	60	-41%	0.04	0.54			
Broward Construction	1,677 54	1,130 100	114% -23%	0.23 0.13	0.11 0.25			
Living Resources	6	20	-23% -63%	0.13	0.23			
Minerals	9	12	-03/6	0.14	0.23			
Ship & Boat Building	54	65	-25%	0.03	0.03			
Tourism & Recreation	1,170	1,265		0.00	0.93			
Transportation	384	410	-38%	0.29	0.07			
Clay	27	17	1526%	0.55	0.01	67	145%	36
Construction	27	17	1526%	0.55	0.01	66	143%	39
Living Resources								
Minerals		0						
Ship & Boat Building		2						
Tourism & Recreation								
Transportation	1.040	722	050/	0.01	0.00	4 205	250/	44.0
Duval Construction	1,048	733	95% 29%	0.81	0.00 0.53	1,305	25%	419
Living Resources	55 5	48 5	-17%	0.04 0.53	0.53	1	-69%	499
Minerals	2	5	-17/0	0.96	0.01	0	-100%	523
Ship & Boat Building	144	109	22%	0.02	0.73	U	-10070	52.
Tourism & Recreation	283	229	22/0	0.80	0.01	605	114%	84
Transportation	560	463	51%	0.44	0.02	657	17%	445
Flagler	44	47		0.33	0.13			
Construction		1						
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	44	53		0.00	0.91			
Transportation				_	_			
Indian River	116	70	8261%	0.80	0.00	294	154%	32
Construction	6	5	302%	0.28	0.17			
Living Resources								
Minerals								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Ship & Boat Building		2		0.44	0.54			
Tourism & Recreation Transportation	110	112 3		0.36	0.16			
Lake	24	25		0.00	0.88			
Construction Living Resources		3						
Minerals		8						
Ship & Boat Building		•						
Tourism & Recreation								
Transportation	24	23		0.00	0.96			
Martin	235	149	1311%	0.80	0.00	575	145%	3
Construction	20	19	30%	0.07	0.39			
Living Resources Minerals								
Ship & Boat Building		13						
Tourism & Recreation	213	217		0.48	0.09			
Transportation	2	2	15%	0.19	0.16			
Miami-Dade	2,672	2,358	348%	0.68	0.00	7,133	167%	2
Construction	177	116	118%	0.45	0.02	258	46%	30
Living Resources	17	49	-62%	0.41	0.02	0	-100%	52
Minerals	6	14		0.09	0.51			
Ship & Boat Building	62	72	-12%	0.16	0.19			
Tourism & Recreation		2,191		0.88	0.01	4,109		
Transportation	2,410	1,018	503%	0.33	0.05	2,523	5%	45
Nassau Construction Living Resources Minerals Ship & Boat Building	157	156 3 2		0.48	0.06			
Tourism & Recreation	156	176		0.23	0.28			
Transportation	1	5		0.23	0.20			
Okeechobee	-	1		1.00	0.01	7		
Construction Living Resources Minerals Ship & Boat Building		1 2						
Tourism & Recreation								
Transportation								
Orange	274	342	-22%	0.62	0.00	83	-70%	50
Construction	40	47	-14%	0.13	0.24			
Living Resources	1	1		0.05	0.61			
Minerals	2	1	.=					
Ship & Boat Building Tourism & Recreation	35	61 7	-45%	0.45	0.14			
Transportation	197	263	-19%	0.44	0.02	120	-39%	47
Osceola Construction		12 17		0.20	0.26 0.01	86		
Construction Living Resources Minerals Ship & Boat Building		17		0.95	0.01	86		
Tourism & Recreation		5						
Transportation		1		0.84	0.26			
Palm Beach	1,511	892	971%	0.51	0.01	3,139	108%	9
Construction	47	70	-19%	0.02	0.66			
Living Resources	5	10	-61%	0.56	0.00	0	-100%	52

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Minerals Ship & Boat Building Tourism & Recreation Transportation	GDP 2009 (Million \$) 8 1,393	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020	2009-2020 predicted	Rank ir %
Ship & Boat Building Tourism & Recreation Transportation						(Million \$)	change (%)	change
Tourism & Recreation Transportation	1.393			0.12	0.46			
Tourism & Recreation Transportation	1.393	45		0.55	0.01	94		
-		1,412		0.42	0.16			
-	, 58	60	58%	0.26	0.09			
Putnam	1	2	3070	0.03	0.70			
Construction	1	2		0.26	0.20			
Living Resources Minerals Ship & Boat Building Tourism & Recreation Transportation	1	2		0.20	0.20			
Seminole	12	16	-20%	0.42	0.02	2	-85%	51
Construction	8	9	1%	0.33	0.06	-	3370	3.
Living Resources	0	3	170	0.55	0.00			
Minerals	2	1		0.78	0.12			
	2	1		0.76	0.12			
Ship & Boat Building		1						
Tourism & Recreation	2	1	700/	0.45	0.00		4000/	-
Transportation	2	7	-70%	0.45	0.02	0	-100%	52
St. Johns	291	171	5265%	0.83	0.00	724	149%	;
Construction	20	13	274%	0.74	0.00	38	87%	1.
Living Resources Minerals Ship & Boat Building								
Tourism & Recreation	270	271		0.54	0.06			
Transportation		2		0.01	0.88			
St. Lucie	103	78	367%	0.72	0.00	233	127%	
Construction	4	6	-25%	0.02	0.66			
Living Resources Minerals	·	1	25,0	5.52	0.00			
Ship & Boat Building	17	24	0%	0.02	0.69			
Tourism & Recreation	82	88		0.03	0.70			
Transportation		0						
Volusia	415	268	3312%	0.75	0.00	1,091	163%	
Construction	5	7	-41%	0.00	0.88	1,031	103/0	
			-41/0			0	100%	5
Living Resources	1	2		0.69	0.01	0	-100%	5
Minerals	0	1		0.71	0.07	164		
Ship & Boat Building		53		0.98	0.01	164		
Tourism & Recreation	409	410		0.44	0.10	_		
Transportation	1	3	-87%	0.75	0.00	0	-100%	5
Georgia	800	675	24%	0.01	0.81			
Brantley								
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation Transportation								
Bryan Construction Living Resources Minerals	16	14	59%	0.72	0.00	22	37%	3
Ship & Boat Building Tourism & Recreation Transportation	16	14	59%	0.72	0.00	22	37%	3!
Camden	12	11	33%	0.69	0.00	18	47%	29

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Construction Living Resources Minerals								
Ship & Boat Building Tourism & Recreation Transportation	12	11	33%	0.69	0.00	18	47%	29
Charlton								
Construction								
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Chatham	479	505	1%	0.03	0.60			
Construction	8	9	29%	0.30	0.05			
Living Resources Minerals	2	3		0.42	0.06			
Ship & Boat Building		11						
Tourism & Recreation	199	296	-33%	0.44	0.02	27	-86%	51
Transportation	270	219	56%	0.75	0.00	389	44%	30
Effingham	19	19						
Construction Living Resources Minerals								
Ship & Boat Building Tourism & Recreation								
Transportation	19	19						
Glynn	257	151	75%	0.08	0.36			
Construction	0	1		0.68	0.04	0	-100%	52
Living Resources Minerals		5						
Ship & Boat Building								
Tourism & Recreation	256	213	75%	0.45	0.07	0		
Transportation	4	10		0.49 0.15	0.02 0.34	0		
Liberty Construction	4	6 1		0.13	0.34			
Living Resources	0	0		0.74	0.00			
Minerals Ship & Boat Building	· ·	J		0.02	0.03			
Tourism & Recreation	4	4		0.03	0.79			
Transportation	•	26		0.00	0.75			
Long								
Construction Living Resources								
Minerals Ship & Boat Building								
Tourism & Recreation								
Transportation McIntosh	12	7	134%	0.05	0.65			
Construction	12	,	134/0	0.03	0.03			
Living Resources		0						
Minerals		3						
Ship & Boat Building								
Tourism & Recreation	12	8	134%	0.85	0.01	18	50%	26
Transportation								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Wayne		2						
Construction Living Resources Minerals		2						
Ship & Boat Building Tourism & Recreation								
Transportation	1 001	020	F0/	0.02	0.64			
North Carolina	1,001	920	5%	0.02	0.64	0	1000/	гээ
Beaufort	51	70	-64%	0.59	0.00	0	-100%	523
Construction	1	1	000/	0.67	0.02	2	123%	65
Living Resources Minerals	13	51 5	-89%	0.88	0.00	0	-100%	523
Ship & Boat Building	13	25						
Tourism & Recreation Transportation	24	26	5%	0.01	0.80			
Bertie	3	2	61%	0.84	0.00	3	23%	427
Construction Living Resources Minerals Ship & Boat Building								
Tourism & Recreation Transportation	3	2	61%	0.84	0.00	3	23%	427
Brunswick	81	85	29%	0.06	0.45			
Construction	12	13	30%	0.06	0.43			
			30%			0	1000/	F 2 2
Living Resources Minerals	1	12		0.65	0.01	0	-100%	523
Ship & Boat Building	3	3	0.40/	0.00	0.00	447	0.50/	4.45
Tourism & Recreation	63	54	84%	0.80	0.00	117	86%	145
Transportation	3	13	-87%	0.44	0.02	0	-100%	523
Camden Construction Living Resources Minerals Ship & Boat Building	1	62 17	-25%	0.04	0.72			
Tourism & Recreation Transportation	1	40 117	-25%	0.04	0.72			
Carteret	103	96	-17%	0.40	0.03	0	-100%	523
Construction	4	4	-7%	0.40	0.03	O	-10070	323
Living Resources	1	18	-90%	0.20	0.11			
Minerals	1	0	-30%	0.20	0.13			
Ship & Boat Building		5		0.71	0.00	20		
Tourism & Recreation	98	103	2%	0.90	0.64	20		
	30		2/0			0		
Transportation Chowan	16	5 22	62%	0.81 0.35	0.01 0.04	0 61	274%	2
Construction Living Resources	10	3	0276	0.23	0.68	01	27470	2
Minerals								
Ship & Boat Building Tourism & Recreation	9 7	15 8	315% -5%	0.42 0.10	0.02 0.42	52	500%	1
Transportation								
Craven	76	72	22%	0.01	0.82			
Construction Living Resources	1	1 1						
Minerals Ship & Boat Building								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Tourism & Recreation	67	73	9%	0.00	0.95			
Transportation	7	6		0.01	0.86			
Currituck	12	14	-23%	0.20	0.19			
Construction	0	1		0.12	0.77			
Living Resources Minerals								
Ship & Boat Building Tourism & Recreation Transportation	12	17	-26%	0.07	0.52			
Dare	164	141	0%	0.22	0.11			
Construction	3	3	142%	0.22	0.11			
	2	12	-85%	0.22	0.13	0	-100%	523
Living Resources Minerals						0		
Ship & Boat Building	27	22	985%	0.60	0.00	89	232%	6
Tourism & Recreation	132	151	-10%	0.00	0.87			
Transportation		8		0.77	0.12			
Gates Construction Living Resources Minerals Ship & Boat Building		5						
Tourism & Recreation Transportation		1 4						
Hertford Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation Transportation								
Hyde	20	19	64%	0.00	0.98			
Construction Living Resources Minerals	11	1 18		0.99 0.81	0.06 0.01	0	-100%	523
Ship & Boat Building Tourism & Recreation Transportation	9	12	-25%	0.19	0.29			
New Hanover	271	277	19%	0.67	0.00	370	36%	358
Construction	18	22	72%	0.43	0.02	44	143%	40
Living Resources	10	15	, 2,0	0.10	0.60		11070	
Minerals	4	5		0.10	0.00			
Ship & Boat Building	1	2		0.55	0.09			
Tourism & Recreation	243	230	37%	0.84	0.00	361	49%	278
	243 5	230 17	-83%	0.78	0.00	0	-100%	523
Transportation Onslow	5 137	107	-83% 61%		0.00	182	-100% 33%	38 ²
Construction			01%	0.87				
	6	4		0.68	0.01	8	43%	316
Living Resources Minerals	0	1		0.64	0.06			
Ship & Boat Building	404	400	E 407	0.00	0.00	470	2007	200
Tourism & Recreation Transportation	131	103 1	54%	0.80	0.00	170	30%	399
Pamlico Construction	13 1	9 1	52%	0.34	0.05	18	40%	333
Living Resources Minerals	7	10		0.92	0.01	0	-100%	523

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Determination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Ship & Boat Building								
Tourism & Recreation Transportation	5	6	-41%	0.56	0.02	1	-75%	505
Pasquotank	29	19	51%	0.11	0.28			
Construction Living Resources Minerals	1	2		0.50	0.05			
Ship & Boat Building Tourism & Recreation Transportation	27	24	43%	0.69	0.01	37	35%	372
Pender	14	13	55%	0.60	0.00	22	58%	235
Construction Living Resources Minerals Ship & Boat Building	1	1		0.81	0.10			
Tourism & Recreation Transportation	13	13	49%	0.50	0.01	21	54%	250
Perquimans Construction Living Resources Minerals	3	3 2	40%	0.64	0.01	6	80%	163
Ship & Boat Building Tourism & Recreation	3	3	40%	0.61	0.01	5	49%	275
Transportation Tyrrell	1	1						
Construction Living Resources Minerals Ship & Boat Building	-	-						
Tourism & Recreation Transportation	1	1						
Washington Construction Living Resources Minerals Ship & Boat Building	5	6	-15%	0.40	0.09			
Tourism & Recreation Transportation	5	6	-15%	0.40	0.09			
South Carolina	2,514	1,978	65%	0.88	0.00	3,530	40%	330
Beaufort	401	289	24%	0.08	0.34			
Construction	5	4		0.30	0.34			
Living Resources Minerals		4		0.41	0.06			
Ship & Boat Building Tourism & Recreation Transportation	397	370 1	23%	0.71	0.00	511	29%	402
Berkeley	19	35	49%	0.03	0.60			
Construction Living Resources Minerals	15	8	1373	0.75	0.03	0		
Ship & Boat Building Tourism & Recreation		3		0.99	0.06			
Transportation	19	31	49%	0.99	0.62			
Charleston	1,059	698	203%	0.02	0.02	2,017	90%	132
Construction	24	16	225%	0.81	0.00	37	59%	233

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources Minerals	5	9	-62%	0.84	0.00	0	-100%	523
Ship & Boat Building	116	92		0.66	0.03	329	183%	15
Tourism & Recreation	778	446	365%	0.83	0.00	1,562	101%	108
Transportation	137	178	-16%	0.19	0.13	1,302	101/0	100
Colleton	3	4	-25%	0.09	0.37			
Construction	_	0		0.08	0.72			
Living Resources Minerals Ship & Boat Building								
Tourism & Recreation Transportation	3	4	-25%	0.12	0.29			
Dorchester	27	24	289%	0.67	0.00	84	212%	
Construction	6	14		0.74	0.03	0	-100%	52
Living Resources Minerals								
Ship & Boat Building	18	29		0.01	0.83			
Tourism & Recreation		2		0.66	0.03	4		
Transportation	3	3	-41%	0.47	0.01	0	-100%	52
Georgetown	102	86	165%	0.90	0.00	179	76%	16
Construction		0		0.12	0.57			
Living Resources	3	2		0.03	0.67			
Minerals Ship & Boat Building	_	_						
Tourism & Recreation	99	82	157%	0.90	0.00	172	74%	18
Transportation	0	3		0.85	0.03	0	-100%	52
Horry	887	834	13%	0.69	0.00	1,099	24%	42
Construction	2	5	-77%	0.12	0.25	1,033	2170	
Living Resources Minerals	1	2	-82%	0.67	0.00	0	-100%	52
Ship & Boat Building								
Tourism & Recreation	877	823	15%	0.71	0.00	1,090	24%	42
Transportation	7	4	288%	0.71	0.00	1,030	98%	11
Jasper	14	9	61%	0.61	0.00	21	47%	29
Construction Living Resources Minerals	17	J	0170	0.01	0.00	21	4770	23
Ship & Boat Building Tourism & Recreation Transportation	14	9	61%	0.61	0.00	21	47%	29
Gulf of Mexico - East	9,577	5,792	265%	0.65	0.00	16,742	75%	17
Alabama	1,455	846	86%	0.05	0.47	10,742	7370	-,
Baldwin	226	200	53%	0.65	0.00	309	36%	35
Construction	3	5	-17%	0.00	0.83	303	30/0	33
Living Resources	2	2	65%	0.03	0.55			
Minerals	2	4	03/0	0.03	0.55			
Ship & Boat Building		0						
Tourism & Recreation	215	188	49%	0.59	0.00	280	30%	39
Transportation	7	8	+3/0	0.39	0.00	200	5070	33
Mobile	1,229	646	93%	0.10	0.43			
Construction	1,229	30	-47%	0.67	0.09	0	-100%	52
						0		
Living Resources	27	36	-26%	0.51	0.01	1	-95%	52
Minerals	505	210	334%	0.08	0.38	447	220/	2.0
Ship & Boat Building	315	127	229%	0.50	0.02	417	32%	38
Tourism & Recreation	118	155	-30%	0.51	0.01	71	-40%	47

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egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Transportation	242	134	35%	0.06	0.43			
Florida	7,756	4,959	412%	0.81	0.00	15,546	100%	109
Alachua	89	46	92%	0.01	0.77			
Construction		0						
Living Resources Minerals	1	1		0.32	0.25			
Ship & Boat Building Tourism & Recreation	15	38 2	-65%	0.60	0.02	0	-100%	523
Transportation	73	26	1747%	0.88	0.00	142	95%	125
Bay	474	270	1005%	0.84	0.00	1,055	122%	69
Construction	6	21	-63%	0.07	0.42	1,033	12270	03
Living Resources	U	2	-03/6	0.19	0.42			
Minerals								
Ship & Boat Building	97	75		0.98	0.00	233	139%	47
Tourism & Recreation	368	351		0.33	0.18			
Transportation Calhoun	3	12	-87%	0.91	0.00	0	-100%	523
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation								
Transportation								
Charlotte	143	115		0.61	0.02	310	117%	76
Construction Living Resources Minerals Ship & Boat Building	10	9 0 9 1		0.47	0.06			
Tourism & Recreation	133	119		0.40	0.13			
Transportation		0		0.63	0.20			
Citrus	46	25	1898%	0.86	0.00	103	123%	67
Construction		3		0.38	0.19			
Living Resources Minerals	1	1		0.71	0.01	0	-100%	523
Ship & Boat Building Tourism & Recreation	45	39		0.92	0.00	75	65%	203
Transportation								
Collier	615	279	4726%	0.92	0.00	1,305	112%	89
Construction	9	21	-20%	0.05	0.49			
Living Resources Minerals	1	2		0.36	0.15			
Ship & Boat Building		2		0.18	0.34			
Tourism & Recreation	602	435		0.85	0.00	1,375	129%	58
Transportation Columbia	4	3		0.37	0.11			
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation Transportation								
DeSoto Construction Living Resources Minerals	0	0		0.62	0.42			

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Ship & Boat Building								
Tourism & Recreation	0			0.62	0.42			
Transportation	0	0		0.62	0.42			
Dixie	3	2						
Construction Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	3	2						
Transportation	5	Z						
Escambia	349	192	1834%	0.87	0.00	796	128%	5
Construction	349 1	7	-83%	0.87	0.00	790	-100%	52
Living Resources	4	2	-03/0	0.30	0.00	U	-100%	32
Minerals	8	7		0.00	0.21			
Ship & Boat Building	o 7	4		0.00	0.93	13	98%	11
					0.02			
Tourism & Recreation	309	286	1010/	0.80		469	52%	26
Transportation	19	13	101%	0.77	0.00	32	64%	21
Franklin	24	18		0.03	0.77			
Construction		1		0.70	0.45			
Living Resources		6		0.73	0.15			
Minerals								
Ship & Boat Building								
Tourism & Recreation	24	22		0.96	0.14			
Transportation								
Gadsden								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Gilchrist								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Glades								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Gulf	10	5		0.94	0.16			
Construction	_ •	_						
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	10	5		0.94	0.16			
Transportation	10	3		3.54	0.10			
Hamilton								
Construction								
Living Resources								
LIVING NESOUICES								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Minerals								
Ship & Boat Building								
Tourism & Recreation Transportation								
Hardee		1						
Construction		1						
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation		_						
Hendry		2						
Construction		2						
Living Resources Minerals		2						
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Hernando	7	15		0.00	0.97			
Construction		1						
Living Resources		1						
Minerals								
Ship & Boat Building	7	15		0.00	0.98			
Tourism & Recreation Transportation	,	15		0.00	0.98			
Highlands	2	3		0.00	0.92			
Construction	2	4		0.91	0.05	0	-100%	523
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation		0						
Transportation Hillsborough	1,138	0 869	276%	0.85	0.00	2,325	104%	102
Construction	214	134	167%	0.63	0.00	2,323 297	39%	336
Living Resources	3	25	-88%	0.11	0.29	237	3370	330
Minerals	5	18		0.14	0.46			
Ship & Boat Building		58		0.43	0.11			
Tourism & Recreation	767	741		0.72	0.02	1,183	54%	248
Transportation	150	235	3%	0.08	0.38			
Holmes								
Construction								
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Jackson								
Construction								
Living Resources								
Minerals								
Ship & Boat Building Tourism & Recreation								
Transportation								
Jefferson								
Construction								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Lafayette Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Lee	693	500	998%	0.70	0.00	1,840	165%	2
Construction	27	39	17%	0.09	0.34	_,		
Living Resources	3	11	-80%	0.48	0.01	0	-100%	52
Minerals	0	4		0.00	0.98			
Ship & Boat Building	13	18	-23%	0.00	0.84			
Tourism & Recreation	645	695		0.01	0.85			
Transportation	5	25	-22%	0.07	0.39			
Leon	17	21	-7%	0.00	0.85			
Construction	16	19	16%	0.24	0.12			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation		2						
Transportation	1	4	-69%	0.71	0.00	0	-100%	52
Levy	15	15		0.34	0.17			
Construction	_	_						
Living Resources	1	2		0.52	0.10			
Minerals								
Ship & Boat Building	4.4	12		0.20	0.42			
Tourism & Recreation	14	13		0.39	0.13			
Transportation Liberty								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Madison								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Manatee	267	172	242%	0.86	0.00	487	82%	15
Construction	3	4	107%	0.01	0.77			
Living Resources		1		0.71	0.36			
Minerals								
Ship & Boat Building		73		0.27	0.23			
Tourism & Recreation	260	208		0.87	0.00	512	97%	12
Transportation Marion	5	8	25.40/	0.11	0.47	40	4.630/	_
BUSTION	19	14	254%	0.39	0.03	49	162%	2

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Construction	2	1		0.50	0.05			
Living Resources								
Minerals		10		0.60	0.22			
Ship & Boat Building								
Tourism & Recreation								
Transportation	17	10	224%	0.38	0.05	36	114%	86
Monroe	601	184	12961%	0.08	0.39			
Construction	4	3	655%	0.80	0.00	8	95%	120
Living Resources Minerals	9	8	379%	0.62	0.00	22	144%	3.
Ship & Boat Building		1						
Tourism & Recreation	584	684		0.39	0.57			
Transportation	3	3	39%	0.00	0.84			
Okaloosa	341	220	3204%	0.77	0.00	872	156%	3
Construction	0	3	-99%	0.17	0.21			
Living Resources Minerals		2		0.01	0.76			
Ship & Boat Building	222	226		0.24	0.47			
Tourism & Recreation	339	336	440/	0.34	0.17			
Transportation	1	21	11%	0.01	0.78		4040/	_
Pasco	115	80	1383%	0.67	0.00	326	184%	1
Construction Living Resources Minerals Ship & Boat Building	22	30 2	182%	0.43	0.05			
Tourism & Recreation Transportation	93	98		0.11	0.47			
Pinellas	1,660	1,171	202%	0.76	0.00	3,105	87%	14
Construction	32	44	-39%	0.15	0.21			
Living Resources	5	22	-87%	0.78	0.00	0	-100%	52
Minerals	2	3		0.32	0.62			
Ship & Boat Building		40		0.09	0.52			
Tourism & Recreation	1,186	1,119		0.59	0.04	1,609	36%	36
Transportation	435	428	3%	0.08	0.37			
Polk	305	358	-2%	0.02	0.65			
Construction	24	30	-6%	0.03	0.62			
Living Resources Minerals		1						
Ship & Boat Building								
Tourism & Recreation		4						
Transportation	281	327	-1%	0.03	0.59			
Santa Rosa	103	64	1453%	0.80	0.00	282	174%	1
Construction		4		0.77	0.00	14		
Living Resources		1		0.93	0.17			
Minerals	1	37		0.89	0.21			
Ship & Boat Building		5		0.59	0.13			
Tourism & Recreation Transportation	102	83		0.86	0.00	162	58%	23
Sarasota	511	316	1406%	0.81	0.00	1,231	141%	4
Construction Living Resources	11	15	-25%	0.49	0.01	7	-41%	47
Minerals	0	1		0.68	0.38			
Ship & Boat Building	2	6	56%	0.03	0.62			
Tourism & Recreation	481	470		0.71	0.02	663	38%	34
Transportation	17	21	-8%	0.03	0.58			

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Sumter								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Suwannee								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Taylor	14	14		0.20	0.31			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	14	14		0.20	0.31			
Transportation								
Wakulla	11	9		0.40	0.37			
Construction								
Living Resources		4						
Minerals								
Ship & Boat Building								
Tourism & Recreation	11	10		0.76	0.33			
Transportation								
Walton	185	108		0.59	0.04	448	143%	4
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	185	108		0.59	0.04	448	143%	4
Transportation								
Washington								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Mississippi	366	369	11%	0.15	0.20			
Hancock	23	17	82%	0.51	0.01	33	42%	32
Construction		0		0.02	0.87			
Living Resources								
Minerals		1		0.36	0.59			
Ship & Boat Building								
Tourism & Recreation	22	16	70%	0.48	0.01	29	33%	38
Transportation	2	2		0.72	0.36			
Harrison	205	243	-10%	0.00	0.87			
Construction	3	5		0.02	0.73			
Living Resources		49		0.67	0.00	0		
Minerals		0						
Ship & Boat Building								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Tourism & Recreation	195	171	54%	0.22	0.11			
Transportation	7	28	-83%	0.58	0.00	3	-59%	494
Jackson	138	108	54%	0.77	0.00	223	61%	222
Construction	3	5		0.14	0.33			
Living Resources		7		0.93	0.01	0		
Minerals		4		0.07	0.83			
Ship & Boat Building	23	24		0.01	0.89			
Tourism & Recreation	105	71	149%	0.81	0.00	173	64%	209
Transportation	7	19	-85%	0.79	0.00	0	-100%	523
Gulf of Mexico - West	77,968	58,110	125%	0.82	0.00	157,629	102%	105
Louisiana	14,251	11,424	89%	0.66	0.00	24,509	72%	184
Calcasieu	373	343		0.05	0.71			
Construction	188	185		0.48	0.19			
Living Resources	1	1		0.22	0.43			
Minerals	176	236		0.21	0.70			
Ship & Boat Building Tourism & Recreation		,						
Transportation	8	15		0.56	0.15			
Cameron	104	106	205%	0.44	0.13	293	181%	16
Construction Living Resources	104	100	20370	0.44	0.01	233	10170	10
Minerals Ship & Boat Building	104	117		0.42	0.06			
Tourism & Recreation		3		0.26	0.20			
Transportation		38		0.54	0.04	0		
Iberia	716	684	128%	0.41	0.02	1,327	85%	148
Construction	6	4	120/0	0.41	0.02	1,327	52%	262
Living Resources	U	11		0.07	0.03	9	32/0	202
Minerals	613	584	128%	0.33	0.04	1,110	81%	161
Ship & Boat Building	59	99	12070	0.81	0.04	0	-100%	523
Tourism & Recreation	37	39	5%	0.31	0.11	O	-10070	323
Transportation	37	24	370	0.21	0.10			
Jefferson	1,275	1,370	19%	0.27	0.10			
Construction	62	1,370 47	63%	0.04	0.33			
Living Resources	4	12	-63%	0.11	0.27			
Minerals	281	355	-03/0	0.13	0.23			
Ship & Boat Building	528	478	103%	0.11	0.43	990	88%	141
Tourism & Recreation	147	478 397	-68%	0.32	0.01	990	-100%	523
	252	254	-08% -14%		0.01	U	-100%	525
Transportation Lafourche	252 1,346	254 858	-14% 302%	0.29 0.89	0.00	2,658	98%	120
Construction	1,346		302%	0.89	0.00	2,036	90%	120
Living Resources	2	2	-2%	0.40	0.12			
Minerals	791	451	-2% 1088%	0.02	0.64	1,770	124%	64
Ship & Boat Building	791	109	1000%	0.00	0.00	1,//0	12470	04
	12	109	141%	0.86	0.92	21	68%	200
Tourism & Recreation					0.00	974		
Transportation Livingston	540 25	363 19	213% 52%	0.86 0.00	0.00	9/4	80%	162
Construction	25 0		34%	0.00	0.96			
	0	1 0		0.99	0.07			
Living Resources Minerals	24	17		0.75	0.06			
Ship & Boat Building Tourism & Recreation Transportation		21		0.88	0.00	42		
Transportation	C E 1 1	6.044	69%	0.40	0.01	12 220	1020/	100
Orleans	6,544	6,044		0.49	0.01	13,230	102%	106
Construction	34	17	265%	0.03	0.59			

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Living Resources	7	7	5%	0.10	0.30			
Minerals	5,467	4,434	149%	0.52	0.01	12,749	133%	53
Ship & Boat Building	4	63	-96%	0.73	0.00	0	-100%	523
Tourism & Recreation	791	1,188	-35%	0.36	0.03	379	-52%	49:
Transportation	243	335	-34%	0.30	0.05			
Plaguemines	1,111	373	82%	0.03	0.54			
Construction	30	27	20%	0.14	0.20			
Living Resources	30	26	2070	0.03	0.76			
Minerals	953	583	99%	0.91	0.01	1,441	51%	26
Ship & Boat Building	933 14	23	-21%	0.15	0.01	1,441	31/0	20
Tourism & Recreation	14	12	77%	0.13	0.21	23	64%	21
						23	64%	21
Transportation	100	82	21%	0.06	0.42			
St. Bernard Construction Living Resources	34	39 5	-24%	0.25	0.08			
Minerals Ship & Boat Building		3		0.02	0.00			
Tourism & Recreation	19	29	-33%	0.22	0.20			
Transportation	15	15	-33 <i>%</i> 6%	0.22	0.20			
•	40					0	1000/	
St. Charles	40	102	-70%	0.37	0.03	0	-100%	52
Construction	4	36		0.75	0.00	0		
Living Resources	1	2		0.36	0.21			
Minerals	13	17		0.49	0.12			
Ship & Boat Building								
Tourism & Recreation		13		0.89	0.00	34		
Transportation	27	64	-63%	0.04	0.53			
St. James	13	14	187%	0.04	0.52			
Construction Living Resources Minerals		7		0.84	0.03	0		
Ship & Boat Building		_		0.04	0.00	10		
Tourism & Recreation		5		0.84	0.00	10		
Transportation	13	13		0.33	0.14			
St. John the Baptist	82	79	67%	0.48	0.01	159	95%	12
Construction Living Resources	46	15		0.87	0.00	0		
Minerals Ship & Boat Building	46	65		0.06	0.70			
Tourism & Recreation	25	19	4300/	0.91	0.00	41	470/	
Transportation	35	30	128%	0.57	0.00	52	47%	28
St. Martin Construction	73	104		0.88	0.02	0	-100%	52
Living Resources	9	9		0.81	0.10	_		
Minerals Ship & Boat Building	64	96		0.80	0.04	0	-100%	52
Tourism & Recreation								
Tourism & Recreation Transportation				0.00	0.83			
Tourism & Recreation Transportation St. Mary	160	248	-36%	0.00				
Tourism & Recreation Transportation St. Mary Construction Living Resources	160	248 13 0	-36%	0.09 0.56	0.69 0.25			
Tourism & Recreation Transportation St. Mary Construction Living Resources Minerals	160	13	-36%	0.09 0.56	0.69 0.25			
Tourism & Recreation Transportation St. Mary Construction Living Resources Minerals Ship & Boat Building		13 0 155		0.09 0.56 0.00	0.69 0.25 0.99			
Tourism & Recreation Transportation St. Mary Construction Living Resources Minerals	160 10 150	13 0	-36% -28% -36%	0.09 0.56	0.69 0.25	0	-100%	52

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Construction	10	8	182%	0.52	0.01	21	106%	100
Living Resources	1	1		0.14	0.63			
Minerals	111	111		0.31	0.33			
Ship & Boat Building								
Tourism & Recreation	16	69	-80%	0.53	0.00	0	-100%	523
Transportation	6	10	-46%	0.01	0.76			
Tangipahoa	81	27	1553%	0.61	0.00	140	73%	182
Construction		2						
Living Resources		9		0.99	0.07			
Minerals	2	2						
Ship & Boat Building		1						
Tourism & Recreation		6		0.71	0.01	12		
Transportation	79	82		0.89	0.22			
Terrebonne	1,173	517	838%	0.50	0.01	2,513	114%	83
Construction	48	22	4311%	0.95	0.00	88	83%	15:
Living Resources	8	19	-66%	0.45	0.01	0	-100%	523
Minerals	914	1,166		0.77	0.32			
Ship & Boat Building		274						
Tourism & Recreation	105	42	2321%	0.73	0.00	228	117%	7
Transportation	98	124	3%	0.13	0.23			
Vermilion	957	645	66%	0.02	0.61			
Construction								
Living Resources	31	14		0.10	0.42			
Minerals	908	728	64%	0.31	0.07			
Ship & Boat Building	300	,20	3 170	0.01	0.07			
Tourism & Recreation	18	16	13%	0.29	0.06			
Transportation	10	5	1370	0.31	0.12			
Texas	63,718	46,686	135%	0.82	0.00	133,121	109%	94
Aransas	58	40	234%	0.74	0.00	119	103%	103
Construction	30	4	23470	0.74	0.00	113	105/0	10.
Living Resources	0	2		0.36	0.15			
Minerals	34	35		0.01	0.13			
Ship & Boat Building	34	33		0.01	0.88			
Tourism & Recreation	24	23	39%	0.59	0.00	33	36%	360
Transportation	24	5	35/0	0.99	0.05	33	30%	300
Brazoria	185	183	40%	0.00	0.03			
Construction	103	101	40%	0.00	0.65			
		101						
Living Resources Minerals	148	91	205%	0.11	0.26			
	146		205%	0.11	0.26			
Ship & Boat Building Tourism & Recreation	10	3 57	070/	0.61	0.00	0	1000/	F2:
	10		-87%	0.61	0.00	0	-100%	523
Transportation	27	19	307%	0.46	0.01	41	50%	27: 20:
Calhoun	61	29	522%	0.85	0.00	101	66%	
Construction	42	40		0.71	0.04	71	69%	18
Living Resources		-						
Minerals	4	6						
Ship & Boat Building	1	1	2001			10	200/	
Tourism & Recreation	14	12	39%	0.77	0.00	18	33%	379
Transportation	4	3		0.72	0.02	6	51%	26
Cameron	252	286	-3%	0.11	0.26	_	,	
Construction	2	1	200%	0.57	0.00	3	49%	27
Living Resources	5	50	-92%	0.61	0.00	0	-100%	523
Minerals	1	1						
Ship & Boat Building	118	61	204%	0.61	0.00	157	34%	378
Tourism & Recreation	75	131	-45%	0.35	0.03	6	-92%	519

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Transportation	52	43	95%	0.66	0.00	95	82%	159
Chambers	21	50	-62%	0.08	0.36			
Construction								
Living Resources		5		0.00	0.98			
Minerals	16	60	-66%	0.02	0.71			
Ship & Boat Building	_	_	240/	0.44			770/	
Tourism & Recreation	5	7	-31%	0.41	0.02	1	-77%	506
Transportation	420	476	4.40/	0.20	0.02	077	4000/	443
Galveston	438	476	14%	0.38	0.03	877	100%	113
Construction	29	20	53%	0.37	0.03	41	41%	328
Living Resources Minerals	13 3	21 109	-42%	0.62 0.29	0.00	0	-100%	523
Ship & Boat Building	19	20	119%	0.29	0.13 0.64			
Tourism & Recreation	289	291	13%	0.03	0.04			
Transportation	289 85	75	10%	0.23	0.10			
Harris	61,073	43,989	142%	0.82	0.00	128,166	110%	92
Construction	309	266	9%	0.32	0.04	378	22%	430
Living Resources	8	14	-26%	0.07	0.37	370	2270	430
Minerals	58,820	41,854	155%	0.82	0.00	126,208	115%	82
Ship & Boat Building	129	105	8%	0.07	0.44	120,200	11570	02
Tourism & Recreation	142	493	-79%	0.63	0.00	0	-100%	523
Transportation	1,664	1,273	61%	0.68	0.00	2,105	26%	414
Jackson	15	12	5%	0.06	0.43	2,103	2070	71-
Construction Living Resources		2	2,0	0.93	0.18			
Minerals Ship & Boat Building	10	12	-31%	0.13	0.35			
Tourism & Recreation Transportation	5	5		0.60	0.04	7	41%	327
Jefferson	203	304	-27%	0.15	0.20			
Construction	57	32	84%	0.08	0.33			
Living Resources	12	11	3 170	0.00	0.00			
Minerals	36	151		0.15	0.53			
Ship & Boat Building	33	71		0.27	0.08			
Tourism & Recreation	45	85	-53%	0.50	0.01	0	-100%	523
Transportation	53	69	-44%	0.15	0.18			
Kenedy Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation Transportation								
Kleberg Construction Living Resources	27	39	-49%	0.55	0.01	0	-100%	523
Minerals Ship & Boat Building		24		0.32	0.11			
Tourism & Recreation Transportation	27	19	34%	0.30	0.13			
Liberty Construction	10	11		0.47	0.31			
Living Resources Minerals Ship & Boat Building	10	11		0.47	0.31			

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Tourism & Recreation Transportation								
Matagorda	38	34	50%	0.10	0.30			
Construction	30	14	3070	0.00	0.92			
Living Resources	5	3		0.18	0.34			
Minerals	8	11		0.15	0.52			
Ship & Boat Building		1						
Tourism & Recreation	25	20	26%	0.39	0.02	27	9%	454
Transportation		1						
Nueces	1,107	1,049	88%	0.76	0.00	2,531	129%	56
Construction		18		0.41	0.02	33		
Living Resources		0						
Minerals	715	626	228%	0.79	0.00	2,041	186%	13
Ship & Boat Building		6		0.77	0.12			
Tourism & Recreation	357	365	7%	0.27	0.07			
Transportation	35	40	20%	0.03	0.54			
Orange	77	53	87%	0.08	0.36			
Construction		9						
Living Resources		0.4	0400/	2.45	0.04		7.00	475
Minerals	44	21	319%	0.46	0.01	77	74%	175
Ship & Boat Building	26	26		0.27	0.11			
Tourism & Recreation	7	32		0.37	0.11			
Transportation	7 59	12	12240/	0.14	0.32	144	1450/	2.4
Refugio Construction	59	36	1334%	0.89	0.00	144	145%	34
Living Resources								
Minerals	55	48		0.75	0.00	130	137%	50
Ship & Boat Building	33	40		0.75	0.00	130	13770	30
Tourism & Recreation	4	4	-5%	0.03	0.69			
Transportation	7	7	-370	0.03	0.05			
San Patricio	92	79	277%	0.45	0.01	211	129%	57
Construction		21		0.51	0.11			
Living Resources		0						
Minerals	59	59		0.28	0.14			
Ship & Boat Building	0	9		0.60	0.04	0	-100%	523
Tourism & Recreation	33	23	87%	0.87	0.00	47	43%	313
Transportation		1		0.74	0.34			
Victoria	2	53		0.21	0.26			
Construction								
Living Resources								
Minerals		203						
Ship & Boat Building								
Tourism & Recreation		2						
Transportation	2	3		0.44	0.15			
Willacy		2		0.95	0.00	0		
Construction								
Living Resources								
Minerals								
Ship & Boat Building		2		0.12	0.65			
Tourism & Recreation		3		0.12	0.65			
Transportation Pacific - Hawaii	4,991	1 3 630	6%	0.92 0.32	0.19 0.05	^	-100%	523
Hawaii	4,991 4,991	3,630 3,630	6% 6%		0.0 5 0.05	0 0		
Hawaii Hawaii	4,991 631	3,630 404	6% 41%	0.32 0.22	0.05	U	-100%	523
паман	021	404	4170	0.22	0.13			

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Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources	6	5	487%	0.77	0.00	13	118%	73
Minerals								
Ship & Boat Building								
Tourism & Recreation	624	531	40%	0.77	0.00	747	20%	437
Transportation	2.001	2.010	20/	0.24	0.04	0	1000/	F22
Honolulu	2,801	2,010	2%	0.34	0.04	0	-100%	523
Construction	65 21	50 33	19%	0.35	0.03 0.04	73 15	12%	452
Living Resources Minerals	1		-42%	0.34 0.81	0.04	15	-29%	467
Ship & Boat Building	53	1 46	58%	0.55	0.29	96	82%	157
Tourism & Recreation	2,399	2,354	2%	0.30	0.00	90	02/0	13/
Transportation	2,399	2,334 251	2% 5%	0.30	0.13			
Kalawao	202	231	370	0.08	0.54			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Kauai	390	389	29%	0.33	0.11			
Construction								
Living Resources	1	2		0.91	0.05	0	-100%	523
Minerals								
Ship & Boat Building								
Tourism & Recreation	389	388	29%	0.32	0.11			
Transportation								
Maui	1,170	1,271	-4%	0.15	0.27			
Construction								
Living Resources		1						
Minerals								
Ship & Boat Building								
Tourism & Recreation	1,170	1,412	-4%	0.05	0.55			
Transportation		1	4=0/					
Pacific - California	30,030	28,700	15%	0.12	0.24			
California	30,030	28,700	15%	0.12	0.24			
Alameda	1,522	1,537	20%	0.00	0.83			
Construction	29	34	18%	0.04	0.50	0	4000/	F 2.2
Living Resources	1	3	-82%	0.40	0.02	0	-100%	523
Minerals	5	9		0.15	0.44			
Ship & Boat Building Tourism & Recreation	707	13	20/	0.83	0.09			
Transportation	797 691	888 604	3% 40%	0.05 0.00	0.46 0.86			
Contra Costa	473	544	49% 18%	0.00	0.53			
Construction	132	129	18%	0.04	0.55			
Living Resources	132	0	1870	0.50	0.03			
Minerals		19		0.75	0.13			
Ship & Boat Building		1		0.73	0.13			
Tourism & Recreation	305	361	18%	0.01	0.74			
Transportation	37	48	18%	0.16	0.18			
Del Norte	29	29	11%	0.10	0.38			
Construction		23	22/0	3.07	0.00			
Living Resources	8	10	-35%	0.24	0.09			
Minerals								
Ship & Boat Building								
Tourism & Recreation	21	21	54%	0.34	0.05	31	49%	277

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Transportation								
Humboldt	116	115	13%	0.07	0.38			
Construction	1	1						
Living Resources	7	9	-49%	0.05	0.48			
Minerals		1						
Ship & Boat Building		0						
Tourism & Recreation	104	100	24%	0.17	0.16			
Transportation	4	5	-23%	0.57	0.00	1	-66%	49
Los Angeles	9,555	9,820	-7%	0.30	0.05			
Construction	250	372	-34%	0.17	0.17			
Living Resources	63	136	-49%	0.51	0.01	8	-87%	51
Minerals	324	927	-73%	0.22	0.11			
Ship & Boat Building	13	21		0.59	0.07			
Tourism & Recreation	1,835	1,094	254%	0.78	0.00	3,522	92%	13
Transportation	7,071	7,281	-12%	0.48	0.01	2,853	-60%	49
Marin	377	377	22%	0.18	0.14			
Construction	31	27		0.46	0.04	50	61%	22
Living Resources		5		0.61	0.43			
Minerals		1		0.33	0.43			
Ship & Boat Building	2	1		1.00	0.00	3	71%	18
Tourism & Recreation	344	356	12%	0.05	0.46			
Transportation		2		0.15	0.31			
Mendocino	60	73	0%	0.04	0.51			
Construction								
Living Resources Minerals Ship & Boat Building		11						
Tourism & Recreation	54	64	-7%	0.06	0.41			
	6	8	204%	0.53	0.41	22	243%	
Transportation Monterey	677	711	12%	0.33	0.00	886	31%	39
Construction	6//	10	1270	0.41	0.02	880	31/0	33
Living Resources	7	8	-53%	0.45	0.83	0	-100%	52
Minerals Ship & Boat Building	,	0	-33/0	0.43	0.01	U	-100%	32
Tourism & Recreation	637	659	14%	0.51	0.01	842	32%	38
Transportation	33	37	36%	0.34	0.04	56	73%	18
Napa	19	53	-36%	0.16	0.18			
Construction	6	12	-60%	0.32	0.04	1	-84%	51
Living Resources Minerals Ship & Boat Building		1						
Tourism & Recreation		51		0.50	0.05			
Transportation	14	13		0.55	0.02	22	63%	21
Orange	3,375	3,127	36%	0.55	0.00	4,655	38%	34
Construction	42	67	-36%	0.34	0.04	0	-100%	52
Living Resources	1	2	-72%	0.75	0.00	0	-100%	52
Minerals	38	146	-85%	0.86	0.00	0	-100%	52
Ship & Boat Building		22		0.65	0.02	0		
Tourism & Recreation	1,627	1,331	87%	0.93	0.00	2,736	68%	19
Transportation	1,667	1,568	32%	0.19	0.13	,		
Sacramento	187	169	12%	0.04	0.51			
Construction	22	15	-16%	0.32	0.04	0	-100%	52
Living Resources		8	· •	0.96	0.02	0		-
Minerals	14	7		0.23	0.23			
Ship & Boat Building	•	•		- <u>-</u>				

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Tourism & Recreation		10		0.80	0.04	0		
Transportation	151	143	19%	0.05	0.46			
San Diego	5,056	4,115	81%	0.89	0.00	6,785	34%	376
Construction	224	172	245%	0.65	0.00	443	98%	121
Living Resources	16	20	250%	0.01	0.73			
Minerals	105	31		0.70	0.00	197	89%	137
Ship & Boat Building	788	473	127%	0.74	0.00	1,122	42%	320
Tourism & Recreation	2,770	2,716	46%	0.48	0.01	3,712	34%	377
Transportation	1,153	713	138%	0.69	0.00	1,341	16%	447
San Francisco	3,142	2,705	44%	0.85	0.00	4,715	50%	269
Construction	11	9	151%	0.39	0.04	19	65%	207
Living Resources	12	21	-24%	0.09	0.33	13	03/0	207
Minerals Ship & Boat Building	12	29	-24/0	0.03	0.33			
Tourism & Recreation	3,076	2,541	62%	0.87	0.00	4,762	55%	246
Transportation	3,076 42	133	-84%	0.87	0.00	4,762	-100%	523
*	398	430	32%	0.40	0.62	U	-100%	323
San Joaquin						21	1200/	71
Construction Living Resources	9	12	4%	0.32	0.04	21	120%	71
Minerals	36	21		0.31	0.12			
Ship & Boat Building								
Tourism & Recreation		140		0.55	0.04	302		
Transportation	352	317	104%	0.66	0.00	528	50%	272
San Luis Obispo	290	242	45%	0.69	0.00	371	28%	409
Construction	47	20		0.18	0.22			
Living Resources	1	1		0.00	0.97			
Minerals Ship & Boat Building	7	9		0.97	0.12			
Tourism & Recreation	234	221	20%	0.75	0.00	303	29%	401
Transportation	1	4	-90%	0.53	0.01	0	-100%	523
San Mateo	1,075	1,028	19%	0.41	0.02	1,219	13%	450
Construction		4						
Living Resources	5	13	-62%	0.46	0.01	0	-100%	523
Minerals	10	10		0.93	0.17			
Ship & Boat Building								
Tourism & Recreation	1,034	958	27%	0.68	0.00	1,259	22%	433
Transportation	26	55	-65%	0.75	0.00	0	-100%	523
Santa Barbara	957	840	5%	0.00	0.86	-		
Construction	15	7	219%	0.61	0.00	18	17%	446
Living Resources	13	1	21370	0.01	0.00	10	1770	110
Minerals Ship & Boat Building	67	107	-77%	0.56	0.00	0	-100%	523
Tourism & Recreation	523	526	24%	0.32	0.04	694	33%	386
						094	33%	300
Transportation	351	201	89%	0.21	0.11	0	1000/	F22
Santa Clara	793	1,096	-47%	0.80	0.00	0	-100%	523
Construction	46	30	149%	0.62	0.00	77	66%	201
Living Resources	2	2		0.11	0.38	2.2		
Minerals		15		0.57	0.05	86		
Ship & Boat Building				.	<u> </u>			
Tourism & Recreation	280	305	14%	0.03	0.59			
Transportation	465	754	-62%	0.85	0.00	0	-100%	523
Santa Cruz Construction	279	353	-10%	0.03	0.59			
Living Resources Minerals		3						

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Ship & Boat Building		1		0.99	0.07			
Tourism & Recreation	259	334	-12%	0.01	0.75			
Transportation	20	18	35%	0.77	0.00	30	52%	261
Solano	226	193	52%	0.53	0.00	354	57%	239
Construction	16	15	-60%	0.26	0.13			
Living Resources		1						
Minerals	19	42		0.06	0.61			
Ship & Boat Building								
Tourism & Recreation	122	99	82%	0.94	0.00	186	52%	259
Transportation	70	59	66%	0.35	0.03	103	48%	282
Sonoma	214	226	25%	0.26	0.08			
Construction	8	13	24%	0.15	0.19			
Living Resources	0	1		0.16	0.50			
Minerals	3	7		0.64	0.06			
Ship & Boat Building								
Tourism & Recreation	177	179	37%	0.35	0.03	232	31%	394
Transportation	25	30	-28%	0.60	0.00	17	-32%	469
Ventura	1,035	733	12%	0.24	0.09			
Construction	42	27	158%	0.74	0.00	57	36%	359
Living Resources	1	2		0.55	0.03	0	-100%	523
Minerals	532	309	2%	0.16	0.18			
Ship & Boat Building								
Tourism & Recreation	373	312	48%	0.79	0.00	490	31%	392
Transportation	87	108	-34%	0.57	0.00	47	-46%	480
Yolo	175	184	34%	0.51	0.01	277	58%	234
Construction								
Living Resources								
Minerals	16	27		0.04	0.80			
Ship & Boat Building								
Tourism & Recreation		2		0.31	0.44			
Transportation	159	175	24%	0.33	0.04	233	46%	299
Pacific - Northwest	7,225	7,375	-6%	0.04	0.50			
Oregon	449	442	3%	0.22	0.11			
Benton	1	1		0.27	0.30			
Construction	1	1		0.27	0.30			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Clatsop	83	92	-22%	0.35	0.03	67	-20%	463
Construction		3		0.42	0.55			
Living Resources	7	26	-87%	0.81	0.00	0	-100%	523
Minerals	•		0,70	0.01	0.00	•	20075	-
iviillerais								
				0.85	0.00	100	31%	396
Ship & Boat Building	76	65	40%	U.O.J				
Ship & Boat Building Tourism & Recreation	76	65 2	40%	0.85	0.00	100	31/0	
Ship & Boat Building Tourism & Recreation Transportation		2	40%					1
Ship & Boat Building Tourism & Recreation Transportation Columbia	76 17		40%	0.64	0.03	58	238%	
Ship & Boat Building Tourism & Recreation Transportation Columbia Construction		2	40%					!
Ship & Boat Building Tourism & Recreation Transportation Columbia Construction Living Resources		2	40%					!
Ship & Boat Building Tourism & Recreation Transportation Columbia Construction Living Resources Minerals		2	40%					!
Ship & Boat Building Tourism & Recreation Transportation Columbia Construction Living Resources Minerals Ship & Boat Building	17	2 14	40%	0.64	0.03			!
Ship & Boat Building Tourism & Recreation Transportation Columbia Construction Living Resources Minerals		2	40%					ţ

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Construction		1						
Living Resources Minerals	3	6	-67%	0.33	0.04	0	-100%	52
Ship & Boat Building		64	400/	0.40	0.04	22	200/	25
Tourism & Recreation	60	61	19%	0.48	0.01	83	38%	35
Transportation	3	6	20/	0.42	0.12			
Curry Construction	28	30	-3%	0.05	0.48			
Living Resources Minerals	5	6	-49%	0.50	0.01	0	-100%	52
Ship & Boat Building Tourism & Recreation	24	23	19%	0.69	0.00	33	38%	33
Transportation Douglas	28	13	307%	0.36	0.04	31	12%	45
Construction	28 7	13 5	30/70	0.36	0.04	16	12% 142%	45 4
Living Resources	1	1		0.75	0.03	2	142% 72%	18
Minerals	14	14		0.58	0.03	2	7270	10
Ship & Boat Building	14	12		0.99	0.01	79		
Tourism & Recreation	6	6	-16%	0.56	0.02	5	-19%	46
Transportation	J	Ü	10/0	0.50	0.02	3	1370	70
Lane	60	50	58%	0.28	0.06			
Construction	1	2	33,0	0.30	0.16			
Living Resources	4	4		0.00	0.87			
Minerals	30	23		0.73	0.07			
Ship & Boat Building		0						
Tourism & Recreation	19	32	-38%	0.24	0.10			
Transportation	7	7	-12%	0.20	0.13			
Lincoln	112	126	-17%	0.03	0.57			
Construction		8						
Living Resources Minerals	7	16	-81%	0.38	0.03	0	-100%	52
Ship & Boat Building Tourism & Recreation	106	2 109	6%	0.04	0.50			
Transportation	100	0	0/0	0.04	0.50			
Polk	1	1		0.76	0.13			
Construction Living Resources Minerals Ship & Boat Building	1	0		0.62	0.21			
Tourism & Recreation								
Transportation	0	0						
Tillamook	16	13	31%	0.30	0.05			
Construction	23	2	01,0	0.52	0.28			
Living Resources Minerals	2	2		0.54	0.06			
Ship & Boat Building								
Tourism & Recreation Transportation	14	13	15%	0.49	0.02	16	16%	44
Washington	33	42	-27%	0.30	0.05	4.0	4.4407	
Construction Living Resources Minerals	19	20 0	245%	0.50	0.01	46	141%	2
Ship & Boat Building Tourism & Recreation								
Transportation	14	23	-66%	0.83	0.00	0	-100%	52

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Yamhill	2	1		0.46	0.53			
Construction Living Resources Minerals Ship & Boat Building Tourism & Recreation	1	1						
Transportation	1	1						
Washington	6,776	7,511	-7%	0.17	0.19			
Clallam	62	62	40%	0.45	0.02	90	44%	31
Construction		•						
Living Resources Minerals Ship & Boat Building		2		0.99	0.07			
Tourism & Recreation Transportation	62	62	40%	0.49	0.01	89	43%	31
Grays Harbor	88	73	52%	0.70	0.00	149	69%	19
Construction	2	3	32/0	0.70	0.20	143	0370	1.
Living Resources	34	26	109%	0.75	0.20	68	100%	1:
Minerals Ship & Boat Building	31	20	10370	0.73	0.00		100/0	-
Tourism & Recreation	53	43	85%	0.60	0.00	85	61%	2
Transportation		8		0.92	0.01	0		
Island	46	42	17%	0.50	0.01	54	19%	4
Construction		1		0.89	0.06			
Living Resources Minerals Ship & Boat Building		1						
Tourism & Recreation Transportation	46	42	17%	0.55	0.01	54	19%	44
Jefferson Construction	36	40	-5%	0.18	0.17			
Living Resources Minerals	3	3		0.08	0.60			
Ship & Boat Building		3		0.85	0.00	11		
Tourism & Recreation Transportation	34	36	-9%	0.01	0.75			
King	3,382	4,601	-33%	0.71	0.00	1,752	-48%	48
Construction	178	151	52%	0.76	0.00	293	65%	20
Living Resources	269	705	-64%	0.00	0.84			_
Minerals	23	10	000/	0.94	0.00	53	135%	!
Ship & Boat Building	202	158	80%	0.44	0.02	255	26%	4:
Tourism & Recreation	1,381	2,438	-53%	0.76	0.00	0	-100%	52
Transportation Kitsap	1,330 1,561	1,142 1,126	19% 126%	0.19 0.77	0.16 0.00	2,343	50%	20
Construction	1,561	1,126	-7%	0.77	0.00	2,343	JU%	20
Living Resources Minerals	3	6	-1/0	0.99	0.38	0	-100%	52
Ship & Boat Building	1,549	936	196%	0.77	0.00	2,208	43%	3:
Tourism & Recreation	_,0 10	190		0.47	0.02	268	.570	J.
Transportation		2		0.56	0.09			
Mason	59	40	970%	0.77	0.00	140	138%	4
Construction Living Resources	20	14	262%	0.77	0.00	54	172%	:
	20	14	262%	0.77	0.00	54	172%	

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Tourism & Recreation	39	39		0.71	0.01	53	36%	365
Transportation Pacific Construction	44	46	-13%	0.08	0.37			
Living Resources Minerals	26	34	-24%	0.14	0.23			
Ship & Boat Building Tourism & Recreation Transportation	18	18	9%	0.69	0.01	23	28%	410
Pierce	699	549	56%	0.27	0.08			
Construction	28	41	-10%	0.06	0.44			
Living Resources	18	24	20%	0.11	0.35			
Minerals	41	39						
Ship & Boat Building	58	31	320%	0.79	0.00	82	40%	331
Tourism & Recreation	267	280	21%	0.00	0.90			
Transportation	287	170	70%	0.26	0.09			
San Juan	44	48	-44%	0.03	0.61			
Construction		40	7-70	0.03	0.01			
Living Resources Minerals		2		0.42	0.35			
Ship & Boat Building Tourism & Recreation	44	58	-44%	0.78	0.00	21	-53%	492
Transportation								
Skagit	89	172	-58%	0.67	0.00	0	-100%	523
Construction	3	5	-66%	0.42	0.02	0	-100%	523
Living Resources Minerals	1	28	-97%	0.64	0.00	0	-100%	523
Ship & Boat Building		31		0.89	0.00	125		
Tourism & Recreation	85	120	-44%	0.74	0.00	16	-81%	510
Transportation		2		0.34	0.41			
Snohomish	393	437	7%	0.06	0.44			
Construction	43	26	57%	0.31	0.06			
Living Resources	32	54	-52%	0.50	0.01	22	-31%	468
Minerals	43	25		0.85	0.03	117	169%	20
Ship & Boat Building	33	56	-26%	0.18	0.17			
Tourism & Recreation	223	282	-1%	0.11	0.30			
Transportation	18	14	281%	0.63	0.00	39	118%	74
Thurston	34	34	915%	0.10	0.33			
Construction	11	10		0.19	0.29			
Living Resources Minerals	0	4	-91%	0.24	0.21			
Ship & Boat Building								
Tourism & Recreation		37		0.86	0.07			
Transportation	23	22		0.31	0.19			
Wahkiakum Construction Living Resources	1	1		0.90	0.05			
Minerals								
Ship & Boat Building Tourism & Recreation Transportation	1	1		0.90	0.05			
Whatcom	238	244	14%	0.17	0.18			
Construction	236 12	15	14/0	0.17	0.18			
Living Resources	12	37		0.85	0.40	0		
LIVING NESOUNCES		5/		0.30	0.05	U		

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Ship & Boat Building		15		0.78	0.01	41		
Tourism & Recreation	211	182	52%	0.89	0.00	303	44%	310
Transportation	16	16	-1%	0.05	0.47			
Pacific - Alaska	7,164	6,176	113%	0.83	0.00	16,160	126%	62
Alaska	7,164	6,176	113%	0.83	0.00	16,160	126%	62
Aleutians East	1	39		0.81	0.10			
Construction								
Living Resources		76						
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	1	1						
Aleutians West	143	61	2406%	0.38	0.02	235	64%	208
Construction								
Living Resources	142	111		0.04	0.71			
Minerals								
Ship & Boat Building	4	2	000/	0.03	0.00	0	1000/	F31
Tourism & Recreation	1	3	-90%	0.92	0.00	0	-100%	523
Transportation	0 5 201	15	2.450/	0.77	0.02	13.500	-100%	523
Anchorage	5,201	3,905	345%	0.83	0.00	13,599	161%	28
Construction	74	64	102%	0.76	0.00	137	86%	14
Living Resources	4.626	12	F220/	0.23	0.23	12.020	4770/	4
Minerals	4,626	3,306	533%	0.83	0.00	12,828	177%	1
Ship & Boat Building	460	465	F70/	0.40	0.01	700	F40/	26
Tourism & Recreation	469	465	57%	0.48	0.01	708	51%	26
Transportation	31	63	-67%	0.59	0.00	0	-100%	52
Bethel	0	1		0.89	0.00	0	-100%	52
Construction								
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation	0	1		0.89	0.00	0	-100%	52
Transportation	U	1		0.69	0.00	U	-100%	52
Bristol Bay	56	25	2476%	0.78	0.00	106	89%	13
Construction	30	25	24/6%	0.78	0.00	106	89%	13
	53	41		0.10	0.41			
Living Resources Minerals	33	41		0.18	0.41			
Ship & Boat Building								
Tourism & Recreation	3	3	45%	0.39	0.04	4	39%	33
Transportation	5	5	4570	0.33	0.04	4	3370	33
Dillingham	0	9	-94%	0.04	0.57			
Construction	J	3	3470	0.04	0.57			
Living Resources		26		0.87	0.24			
Minerals		20		0.07	0.24			
Ship & Boat Building								
Tourism & Recreation	0	2	-94%	0.87	0.00	0	-100%	52
Transportation	Ü	_	3470	0.07	0.00	o o	10070	32
Haines	2	13	-83%	0.54	0.00	0	-100%	52
Construction	-	13	53,0	0.5 +	0.00	J	100/0	52
Living Resources		12						
Minerals		12						
Ship & Boat Building								
Tourism & Recreation	2	12	-83%	0.67	0.00	0	-100%	52
Transportation	_	12	33,0	5.07	5.00	Ũ	100/0	52
Hoonah-Angoon		12		0.68	0.39			

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Construction								
Living Resources								
Minerals								
Ship & Boat Building Tourism & Recreation		12		0.68	0.39			
Transportation		12		0.08	0.59			
Juneau	59	48	50%	0.02	0.68			
Construction	33	4	3070	0.02	0.00			
Living Resources	7	5		0.82	0.01	11	60%	22
Minerals					0.00			
Ship & Boat Building								
Tourism & Recreation	52	45	32%	0.04	0.49			
Transportation								
Kenai Peninsula	594	442	383%	0.77	0.00	1,586	167%	2
Construction		3				,		
Living Resources	12	31	-84%	0.80	0.00	0	-100%	52
Minerals	504	484		0.53	0.03	1,510	200%	1
Ship & Boat Building		1						
Tourism & Recreation	74	69	66%	0.73	0.00	117	59%	23
Transportation	4	11		0.72	0.01	0	-100%	52
Ketchikan Gateway	11	49	-85%	0.68	0.00	0	-100%	52
Construction								
Living Resources		30		0.71	0.16			
Minerals								
Ship & Boat Building								
Tourism & Recreation	11	18	-49%	0.59	0.00	3	-71%	50
Transportation		40		0.71	0.02	0		
Kodiak Island	14	115	-93%	0.78	0.00	0	-100%	52
Construction		2						
Living Resources		149		0.68	0.01	0		
Minerals								
Ship & Boat Building								
Tourism & Recreation	14	12	22%	0.32	0.05			
Transportation		2		0.29	0.46			
Lake and Peninsula	3	4		0.24	0.22			
Construction		-		0.70				
Living Resources		6		0.70	0.37			
Minerals								
Ship & Boat Building	2	2		0.70	0.04	7	1170/	7
Tourism & Recreation	3	3		0.79	0.04	7	117%	7
Transportation Matanuska-Susitna	57	47	111%	0.84	0.00	114	98%	11
Construction	37	47	11170	0.64	0.00	114	90%	11
Living Resources								
Minerals		6		0.02	0.83			
Ship & Boat Building		O .		0.02	0.03			
Tourism & Recreation	57	44	111%	0.90	0.00	103	80%	16
Transportation	3,		111/0	0.50	0.00	103	0070	10
Nome	1	3	-82%	0.65	0.00	0	-100%	52
Construction	-	J	32,3	0.00	0.00	J	20070	32
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	1	3	-82%	0.65	0.00	0	-100%	52
Transportation								

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North Slope	957	1,350	-39%	0.06	0.42			
Construction								
Living Resources								
Minerals	955	1,347	-39%	0.06	0.42			
Ship & Boat Building								
Tourism & Recreation	2	3	-73%	0.80	0.00	0	-100%	523
Transportation								
Northwest Arctic	1	2		0.03	0.73			
Construction								
Living Resources								
Minerals								
Ship & Boat Building	4	2		0.02	0.72			
Tourism & Recreation	1	2		0.03	0.73			
Transportation Prince of Wales-Outer								
Ketchikan		3		0.02	0.70			
Construction		3		0.02	0.70			
Living Resources		3		0.61	0.43			
Minerals		3		0.01	0.43			
Ship & Boat Building								
Tourism & Recreation		3		0.18	0.25			
Transportation		3		0.10	0.23			
Sitka	6	17	-48%	0.08	0.35			
Construction				0.00	0.00			
Living Resources		13		0.07	0.67			
Minerals								
Ship & Boat Building								
Tourism & Recreation	6	12	-48%	0.42	0.02	2	-74%	503
Transportation								
Valdez-Cordova	56	47	-15%	0.40	0.02	0	-100%	523
Construction								
Living Resources	34	26	-31%	0.57	0.00	0	-100%	523
Minerals		13		0.84	0.26			
Ship & Boat Building								
Tourism & Recreation	22	17	35%	0.07	0.38			
Transportation		6						
Wade Hampton								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation		32		0.64	0.00	0		
Wrangell-Petersburg Construction		32		0.64	0.00	U		
Living Resources		33		0.46	0.03	0		
Minerals		33		0.40	0.03	U		
Ship & Boat Building								
Tourism & Recreation		4		0.71	0.00	0		
Transportation		9		5.71	5.00	J		
Yakutat City and		3						
Borough	2	2	33%	0.00	0.98			
Construction	_	_	20,0	3.00	2.30			
Living Resources		2						
Minerals		-						

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Ship & Boat Building	2	2	220/	0.01	0.00			
Tourism & Recreation	2	2	33%	0.01	0.80			
Transportation Great Lakes - West	7,288	6,818	23%	0.87	0.00	9,342	28%	407
Illinois	4,728	4,408	23%	0.74	0.00	5,827	23%	423
Cook	4,728 4,390	4,408	22%	0.74	0.00	5,407	23%	425
Construction	4,390	4,079 71	-49%	0.72	0.00	3,407 0	-100%	523
Living Resources	30	33	14%	0.75	0.47	O .	-10070	323
Minerals	80	47	109%	0.56	0.00	160	100%	114
Ship & Boat Building	5	47	10370	0.49	0.00	100	100%	114
Tourism & Recreation	3,223	2,751	44%	0.43	0.19	4,335	34%	373
				0.78	0.00	4,333 884	-12%	459
Transportation Lake	1,004 337	1,176 328	-17% 22%	0.63	0.00	004	-1270	455
Construction	3	5	-39%	0.25	0.08			
Living Resources		•		0.07	0.00		4000/	F22
Minerals	0	0		0.97	0.02	0	-100%	523
Ship & Boat Building	254	200	70/	0.04	0.76			
Tourism & Recreation	254	293	-7%	0.01	0.76			
Transportation	81	77		0.29	0.35			
Indiana	247	295	-9%	0.00	0.97			
La Porte	76	104	-37%	0.21	0.11			
Construction Living Resources Minerals								
Ship & Boat Building	- 4	62	40/	0.04	0.00			
Tourism & Recreation	54	62	-4%	0.01	0.82		4000/	
Transportation	23	42	-65%	0.89	0.00	0	-100%	523
Lake	92	114	-6%	0.00	0.86			
Construction	32	31	-9%	0.00	0.87			
Living Resources	_							
Minerals	6	6		0.04	0.88			
Ship & Boat Building								
Tourism & Recreation	31	58	3%	0.01	0.81			
Transportation	22	25	-32%	0.47	0.01	6	-71%	501
Porter Construction Living Resources	79	76	52%	0.45	0.01	107	35%	371
Minerals Ship & Boat Building								
Tourism & Recreation	57	47	61%	0.86	0.00	77	36%	364
Transportation	23	29	34%	0.00	0.91			
Michigan	1,222	1,151	28%	0.72	0.00	1,670	37%	355
Alcona	1	, 2	-52%	0.18	0.15	,		
Construction Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation Transportation	1	2	-52%	0.18	0.15			
Alger Construction	4	8	-43%	0.18	0.15			
Living Resources Minerals								
Ship & Boat Building	4	•	430/	0.40	0.45			
Tourism & Recreation	4	8	-43%	0.18	0.15			

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Transportation								
Allegan	43	22	274%	0.82	0.00	59	38%	348
Construction	6	3		0.99	0.07			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	34	20	195%	0.85	0.00	48	44%	312
Transportation	3	3		0.59	0.13			
Alpena	10	12	-26%	0.72	0.00	6	-41%	477
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	10	12	-26%	0.72	0.00	6	-41%	477
Transportation								
Antrim	5	3	438%	0.62	0.00	10	100%	110
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	5	3	438%	0.62	0.00	10	100%	110
Transportation								
Arenac	2	12	-82%	0.46	0.01	0	-100%	523
Construction								
Living Resources								
Minerals		1		0.71	0.02	9		
Ship & Boat Building								
Tourism & Recreation	2	12	-82%	0.52	0.01	0	-100%	523
Transportation								
Baraga	3	3	7%	0.12	0.24			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	3	3	7%	0.12	0.24			
Transportation	J	J	,,,	0.11	0.2.			
Bay	76	56	95%	0.60	0.00	98	28%	405
Construction	, 0	1	3370	0.22	0.69	30	2070	403
Living Resources		_		0.22	0.03			
Minerals								
Ship & Boat Building								
Tourism & Recreation	76	55	95%	0.59	0.00	97	28%	411
Transportation	, 0	1	3370	0.55	0.00	3,	2070	711
Benzie	4	23	-88%	0.59	0.00	0	-100%	523
Construction	7	2	0070	0.55	0.00	O	10070	323
Living Resources		2						
Minerals								
Ship & Boat Building								
Tourism & Recreation	4	23	-88%	0.60	0.00	0	-100%	523
	4	23	-0070	0.60	0.00	U	-100%	523
Transportation Borrion	85	81	120/	0.63	0.00	111	2.40/	27/
Berrien	85 8		13%	0.63	0.00	114	34%	374
Construction	8	9		0.09	0.43			
Living Resources								
Minerals								
Ship & Boat Building								

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Tourism & Recreation	70	64	39%	0.74	0.00	93	33%	382
Transportation	6	11	-75%	0.38	0.02	0	-100%	523
Charlevoix	14	18	-2%	0.03	0.60			
Construction	1	1		0.23	0.27			
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation	12	17	-11%	0.08	0.34			
Transportation								
Cheboygan	30	19	295%	0.40	0.02	48	56%	242
Construction		8		0.90	0.05	0		
Living Resources		1		0.45	0.33			
Minerals								
Ship & Boat Building								
Tourism & Recreation	20	15	166%	0.70	0.00	37	82%	155
Transportation	10	7		1.00	0.02	17	68%	198
Chippewa	8	28	-76%	0.13	0.23			
Construction								
Living Resources		1		0.96	0.12			
Minerals								
Ship & Boat Building								
Tourism & Recreation	8	28	-76%	0.13	0.23			
Transportation		1		0.93	0.04	0		
Delta	24	22	26%	0.43	0.02	29	21%	434
Construction								
Living Resources Minerals		0						
Ship & Boat Building								
Tourism & Recreation	24	22	26%	0.63	0.00	29	19%	442
Transportation		3						
Emmet	40	68	-24%	0.01	0.82			
Construction Living Resources Minerals Ship & Boat Building								
Tourism & Recreation	40	68	-24%	0.00	0.83			
Transportation		2						
Gogebic	7	9	-48%	0.76	0.00	0	-100%	523
Construction Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation	7	9	-48%	0.76	0.00	0	-100%	523
Transportation								
Grand Traverse	216	175	60%	0.53	0.00	314	45%	303
Construction	2	2		0.44	0.54			
Living Resources								
Minerals	73	64	46%	0.32	0.04	133	83%	152
Ship & Boat Building								
Tourism & Recreation	141	108	71%	0.63	0.00	181	28%	404
Transportation	1.1	4	, 1,0	0.00	0.86	101	20,0	.0-
Houghton	7	9	15%	0.26	0.07			
Construction Living Resources Minerals	,	,	13/0	0.20	0.07			

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Ship & Boat Building								
Tourism & Recreation Transportation	7	9	15%	0.26	0.07			
Huron	6	6	3%	0.24	0.09			
Construction Living Resources Minerals	1	1		0.52	0.04	1	27%	41
Ship & Boat Building Tourism & Recreation Transportation	5	5	-15%	0.13	0.24			
losco Construction Living Resources Minerals Ship & Boat Building	11	14	-8%	0.02	0.62			
Tourism & Recreation	11	14	-8%	0.02	0.62			
Transportation Keweenaw	6	5		0.06	0.69			
Construction Living Resources Minerals Ship & Boat Building								
Tourism & Recreation Transportation	6	5		0.06	0.69			
Leelanau Construction Living Resources Minerals Ship & Boat Building	29	32	13%	0.01	0.73			
Tourism & Recreation Transportation	29	32	13%	0.01	0.73			
Luce Construction Living Resources Minerals Ship & Boat Building	3	5	21%	0.01	0.78			
Tourism & Recreation Transportation	3	5	21%	0.01	0.78			
Mackinac Construction	64	64	5%	0.08	0.34			
Living Resources Minerals Ship & Boat Building	2	2		0.03	0.66			
Tourism & Recreation Transportation	62	62	2%	0.06	0.44			
Manistee Construction Living Resources	11	13	29%	0.00	0.88			
Minerals Ship & Boat Building		3		0.03	0.89			
Tourism & Recreation Transportation	11	13	29%	0.00	0.83			
Marquette Construction Living Resources	62	47	66%	0.74	0.00	86	38%	34

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Determination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Minerals								
Ship & Boat Building								
Tourism & Recreation	62	47	66%	0.74	0.00	86	38%	340
Transportation								
Mason	15	16	7%	0.01	0.75			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	15	16	7%	0.01	0.75			
Transportation								
Menominee	8	7	3%	0.00	0.89			
Construction								
Living Resources								
Minerals								
Ship & Boat Building	0	-	20/	0.00	0.00			
Tourism & Recreation	8	7	3%	0.00	0.89			
Transportation	6.4	0.5	100/	0.02	0.57			
Muskegon	64	85	-10%	0.03	0.57			
Construction	3	3		0.18	0.41			
Living Resources Minerals								
Ship & Boat Building								
Tourism & Recreation	48	70	-33%	0.32	0.04	31	-34%	47
Transportation	14	14	1818%	0.70	0.00	37	164%	2
Oceana	12	11	-7%	0.26	0.08	37	10470	2
Construction Living Resources			,,,	0.20	0.00			
Minerals								
Ship & Boat Building								
Tourism & Recreation	7	10	-46%	0.60	0.00	0	-100%	52
Transportation	5	4	-4070	0.44	0.54	· ·	-100/0	32
Ontonagon	0	2	-90%	0.34	0.04	0	-100%	52
Construction	Ü	_	3070	0.51	0.01	Ü	10070	32
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	0	2	-90%	0.34	0.04	0	-100%	52
Transportation								
Ottawa	69	99	-38%	0.63	0.00	46	-33%	47
Construction		2		0.93	0.00	0		
Living Resources								
Minerals	5	3		0.88	0.22			
Ship & Boat Building	1	4		0.75	0.33			
Tourism & Recreation	56	86	-42%	0.67	0.00	29	-48%	48
Transportation	7	9	-16%	0.06	0.42			
Presque Isle	3	2	35%	0.14	0.21			
Construction Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	3	2	35%	0.14	0.21			
Transportation								
Saginaw	173	99		0.74	0.00	514	197%	1
Construction		0						

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources Minerals		1						
Ship & Boat Building								
Tourism & Recreation	168	0.4		0.73	0.00	507	202%	g
		94		0.73	0.00	507	202%	3
Transportation Sanilac	5 4	5 3	148%	0.38	0.11	8	82%	156
Construction	4		148%	0.75	0.00	٥	82%	150
		1		0.51	0.11			
Living Resources Minerals								
Ship & Boat Building	4	2	1.400/	0.76	0.00	6	400/	27
Tourism & Recreation	4	3	148%	0.76	0.00	6	49%	27
Transportation	2	4	220/	0.55	0.00	2	F.00/	40
Schoolcraft	3	4	-33%	0.55	0.00	2	-50%	48
Construction								
Living Resources								
Minerals								
Ship & Boat Building	3	4	-33%	0.55	0.00	2	-50%	48
Tourism & Recreation	3	4	-33%	0.55	0.00	2	-50%	40
Transportation	90	00	10/	0.07	0.20			
St. Clair Construction	80	82	-1%	0.07	0.39			
		1		0.06	0.56			
Living Resources								
Minerals		0						
Ship & Boat Building	80	0	10/	0.05	0.47			
Tourism & Recreation	80	81	-1%	0.05	0.47			
Transportation	0	3 1	770/	0.00	1.00			
Tuscola Construction	U	1	-77%	0.00	1.00			
Living Resources Minerals		1						
Ship & Boat Building		1						
Tourism & Recreation	0	0	-77%	0.84	0.00	0	-100%	52
Transportation	U	1	-///0	0.64	0.00	U	-100%	32
Van Buren	18	19	22%	0.00	0.85			
Construction	10	19	22/0	0.00	0.85			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	15	15	7%	0.11	0.27			
Transportation	4	4	173%	0.11	0.15			
Wexford	4	7	17570	0.16	0.13			
Construction								
Minerals								
Ship & Boat Building								
Transportation								
Minnesota	152	94	93%	0.51	0.01	191	25%	41
Carlton	132	54	33/0	5.51	0.01	131	25/0	71
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation								
Cook	26	33	-11%	0.00	0.96			
Construction	20	33	11/0	5.00	0.50			
CONSTRUCTION								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources Minerals								
Ship & Boat Building Tourism & Recreation Transportation	26	33	-11%	0.00	0.96			
Lake	16	11	126%	0.98	0.00	24	46%	29
Construction Living Resources Minerals Ship & Boat Building								
Tourism & Recreation Transportation	16	11	126%	0.98	0.00	24	46%	29
St. Louis Construction Living Resources	110	74 3	157%	0.80	0.00	200	82%	15
Minerals Ship & Boat Building		2						
Tourism & Recreation	110	72	156%	0.77	0.00	193	76%	16
Transportation	0	2		0.47	0.04	0	-100%	52
Wisconsin	939	944	32%	0.70	0.00	1,533	63%	21
Ashland Construction Living Resources Minerals Ship & Boat Building	15	12	72%	0.86	0.00	22	46%	29
Tourism & Recreation Transportation	15	12	72%	0.86	0.00	22	46%	29
Bayfield Construction Living Resources Minerals Ship & Boat Building	11	17	-62%	0.50	0.01	0	-100%	52
Tourism & Recreation Transportation	11	17	-62%	0.50	0.01	0	-100%	52
Brown	144	124	33%	0.51	0.01	163	13%	45
Construction Living Resources Minerals Ship & Boat Building	2	2		1.00	0.04	1	-44%	47
Tourism & Recreation	112	99	34%	0.59	0.00	139	23%	42
Transportation	30	24	23%	0.00	0.93			
Door	73	72	-9%	0.00	0.99			
Construction Living Resources Minerals Ship & Boat Building	4	4						
Tourism & Recreation Transportation	69	72	-13%	0.00	0.87			
Douglas Construction Living Resources Minerals	32	35	20%	0.05	0.48			
Ship & Boat Building Tourism & Recreation Transportation	32	31 12	20%	0.13 0.23	0.25 0.52			

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

gion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Iron								
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	4.6	42	260/	0.44	0.00		200/	4.5
Kenosha	46	43	36%	0.41	0.02	55	20%	43
Construction								
Living Resources								
Minerals								
Ship & Boat Building	27	2.4	270/	0.22	0.06			
Tourism & Recreation	37 9	34	37% 32%	0.32 0.12	0.06			
Transportation Kewaunee	5	9 6	-11%	0.12				
	5	б	-11%	0.18	0.25			
Construction								
Living Resources Minerals		1						
Ship & Boat Building		1						
Tourism & Recreation	5	6	-11%	0.47	0.04	5	-10%	4
Transportation	5	0	-1170	0.47	0.04	5	-10%	4:
Manitowoc	46	48	2%	0.11	0.30			
Construction	40	46 14	270	0.11	0.30			
Living Resources		14		0.95	0.14			
Minerals	9	7		0.99	0.05			
Ship & Boat Building	9	,		0.99	0.05			
Tourism & Recreation	37	43	-17%	0.45	0.02	22	-39%	4
Transportation	37	43	-1770	0.43	0.02	22	-3570	-
Marinette	17	17	4%	0.19	0.16			
Construction	1,	1,	470	0.13	0.10			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	17	17	4%	0.19	0.16			
Transportation								
Milwaukee	376	430	52%	0.56	0.01	865	130%	!
Construction		9		0.43	0.34			
Living Resources		1		0.11	0.58			
Minerals								
Ship & Boat Building								
Tourism & Recreation	312	242	71%	0.80	0.00	476	53%	2
Transportation	64	185	-1%	0.19	0.15			
Oconto	4	6	-19%	0.10	0.38			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	4	6	-19%	0.10	0.38			
Transportation								
Ozaukee	50	43	53%	0.74	0.00	69	38%	3
Construction		1						
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	50	42	53%	0.72	0.00	67	35%	3

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Transportation		1		0.95	0.15			
Racine	47	42	32%	0.69	0.00	67	43%	317
Construction		2		1.00	0.03	0		
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	27	26	34%	0.78	0.00	43	55%	244
Transportation	20	15	30%	0.28	0.08			
Sheboygan	73	54	102%	0.84	0.00	123	68%	199
Construction								
Living Resources								
Minerals								
Ship & Boat Building	62	F.4	7.40/	0.00	0.00	104	650/	20/
Tourism & Recreation	63 10	51 9	74%	0.83 0.79	0.00 0.11	104	65%	206
Transportation			2%	0.79 0.24	0.11 0.09			
Great Lakes - East	3,266 770	3,437	-38%					
Michigan Macomb	770 228	1,168 281	-38% -32%	0.26 0.30	0.08 0.05			
Construction	16	14	-32 <i>%</i> -6%	0.30	0.55			
Living Resources	10	14	-0/0	0.54	0.33			
Minerals	1	11		0.04	0.10			
Ship & Boat Building	_	11		0.04	0.67			
Tourism & Recreation	82	87	-12%	0.12	0.24			
Transportation	129	177	-43%	0.35	0.03	63	-51%	489
Monroe	95	86	40%	0.81	0.00	131	38%	344
Construction				5.52	5.55		55,5	•
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	57	53	30%	0.81	0.00	78	36%	363
Transportation	37	32	57%	0.62	0.00	53	42%	322
Wayne	447	801	-46%	0.20	0.12			
Construction	6	15	-59%	0.40	0.02	0	-100%	523
Living Resources	1	3	-83%	0.60	0.00	0	-100%	523
Minerals								
Ship & Boat Building								
Tourism & Recreation	228	242	48%	0.09	0.31			
Transportation	212	540	-68%	0.70	0.00	5	-98%	52
New York	1,118	931	55%	0.92	0.00	1,549	39%	338
Cayuga	17	14		0.04	0.59			
Construction		4-						
Living Resources		15						
Minerals								
Ship & Boat Building	15	1.4		0.05	0.60			
Tourism & Recreation	15	14		0.05	0.68			
Transportation	2 157	4	300%	0.37	0.06			
Chautauqua Construction	157	120 13	306%	0.04	0.52			
Living Resources		24						
Minerals	33	24 27	343%	0.71	0.00	98	196%	12
Ship & Boat Building	33	21	34370	0.71	0.00	30	150%	1.
Tourism & Recreation	123	75	296%	0.41	0.02	199	62%	220
Transportation	123	35	23070	0.41	0.02	199	0270	220
	418	373	32%	0.32	0.07	456	9%	455
Erie								

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

egion, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Living Resources		2		0.60	0.02	1		
Minerals	3	6		0.00	0.98			
Ship & Boat Building		0						
Tourism & Recreation	330	272	70%	0.46	0.01	402	22%	43:
Transportation	75	80	-33%	0.12	0.24			
Franklin	17	17		0.24	0.27			
Construction Living Resources Minerals Ship & Boat Building		0						
Tourism & Recreation	17	19		0.13	0.48			
Transportation								
Jefferson Construction Living Resources	31	44 2	-33%	0.59	0.00	12	-63%	49
Minerals		1						
Ship & Boat Building		0						
Tourism & Recreation	31	43	-34%	0.65	0.00	10	-68%	49
Transportation	1	1		0.01	0.77			
Monroe	193	154	66%	0.90	0.00	285	47%	28
Construction	6	6		0.46	0.32			
Living Resources Minerals Ship & Boat Building	18	19 1	-16%	0.27	0.08			
Tourism & Recreation	111	87	76%	0.83	0.00	150	35%	37
Transportation	57	46	82%	0.74	0.00	109	90%	13
Niagara	137	146	21%	0.14	0.24	103	3070	1.
Construction	0	7	21/0	0.82	0.04	0	-100%	52
Living Resources Minerals	, and the second	2		0.02	0.01	Ü	100/0	3.
Ship & Boat Building	420	101	2501	0.10	0.15			
Tourism & Recreation	128	131	26%	0.19	0.16		700/	
Transportation	8	12	-25%	0.42	0.02	2	-79%	50
Orleans Construction Living Resources Minerals Ship & Boat Building	3	4	-6%	0.00	0.92			
Tourism & Recreation	1	1		0.28	0.18			
Transportation	2	3	-38%	0.04	0.52			
Oswego Construction	37	31	16%	0.00	0.95			
Living Resources Minerals Ship & Roat Ruilding	5	5		0.09	0.80			
Ship & Boat Building	20	30	C0 /	0.46	0.20			
Tourism & Recreation	30	29	-6%	0.16	0.20			
Transportation	2	3	4300/	0.77	0.05	140	F 7 0/	22
St. Lawrence Construction Living Resources	89	56	138%	0.72	0.00	140	57%	23
Minerals		0						
Ship & Boat Building								
Tourism & Recreation	63	38	171%	0.75	0.00	106	69%	19
Transportation	26	17	84%	0.55	0.01	33	28%	40
Wayne	19	17	15%	0.19	0.16			

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Construction	0	1		0.99	0.00	0	-100%	523
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	12	13	7%	0.03	0.60			
Transportation	6	5	34%	0.73	0.00	8	33%	385
Ohio	1,293	1,202	20%	0.80	0.00	1,778	38%	352
Ashtabula	54	43	58%	0.72	0.00	75	39%	334
Construction		9		0.96	0.13			
Living Resources								
Minerals	4	4						
Ship & Boat Building								
Tourism & Recreation	42	39	23%	0.69	0.00	54	28%	406
Transportation	8	3		0.42	0.35			
Cuyahoga	547	584	-11%	0.01	0.80			
Construction	10	17	-15%	0.19	0.14			
Living Resources	1	6	-90%	0.82	0.00	0	-100%	523
Minerals		5		0.64	0.20			
Ship & Boat Building								
Tourism & Recreation	333	341	-1%	0.27	0.07			
Transportation	203	219	-20%	0.34	0.04	160	-21%	46
Erie	161	129	63%	0.91	0.00	246	53%	25
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	158	128	60%	0.90	0.00	242	53%	256
Transportation	2	3		0.65	0.19			
Lake	199	170	63%	0.93	0.00	283	42%	32:
Construction		1		0.78	0.31			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	191	167	58%	0.92	0.00	277	45%	304
Transportation	8	4	824%	0.84	0.00	14	75%	174
Lorain	37	40	-3%	0.01	0.69			
Construction		1		0.09	0.48			
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	34	37	-7%	0.02	0.66			
Transportation	3	3	79%	0.07	0.39			
Lucas	155	140	57%	0.61	0.00	323	108%	9!
Construction	1	2	-74%	0.61	0.00	0	-100%	523
Living Resources		1		0.33	0.43			
Minerals								
Ship & Boat Building								
Tourism & Recreation	125	65	377%	0.73	0.00	257	106%	99
Transportation	29	72	-57%	0.01	0.76			
Ottawa	63	66	2%	0.35	0.03	81	29%	40
Construction		0						
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation	63	66	3%	0.38	0.02	82	29%	400

Table A4. Change in ocean-related GDP for U.S coastal regions, states and counties, 1990-2009, and predicted values in 2020

Region, State, County, Sector	GDP 2009 (Million \$)	GDP avg. 1997-2009 (Million \$)	1997–2009 change (%)	Coefficient of Deter- mination	P-value	GDP Predicted value, 2020 (Million \$)	2009-2020 predicted change (%)	Rank in % change
Transportation		1		0.40	0.13			
Sandusky	10	5		0.68	0.09			
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation								
Transportation	10	5		0.68	0.09			
Wood	67	28	923%	0.83	0.00	126	88%	140
Construction								
Living Resources								
Minerals								
Ship & Boat Building								
Tourism & Recreation		1						
Transportation	67	27	923%	0.83	0.00	126	88%	139
Pennsylvania	85	136	-52%	0.27	0.07			
Erie	85	136	-52%	0.27	0.07			
Construction		3						
Living Resources		0		0.22	0.69			
Minerals	14	9		0.68	0.01	32	123%	66
Ship & Boat Building								
Tourism & Recreation	56	131	-68%	0.65	0.00	0	-100%	523
Transportation	15	8	310%	0.79	0.00	32	123%	68
Grand Total	200,447	163,359	64%	0.91	0.00	319,271	59%	230

^{1.} OLS regression analysis was not carried out for counties and/or sectors with less than 3 observations for the study period - 1997 through 2009.

Source: National Ocean Economics Program, Ocean economic data.

^{2.} Statistical significance is determined by the probability value (P-value) of a T-test of the slope coefficient. Predictions were not computed if the P-value was greater than 0.05 or 5 percent.

^{3.} Values for the coefficient of determination range from zero to one, with values close to one indicating that the regression model explains more of the variation in the independent variable (GDP).

^{4.} The predicted value for 2020 was estimated by multiplying the estimated slope coefficient by the 2020 and adding the intercept coefficient. If this value was less than zero, then zero was used for that predicted value.

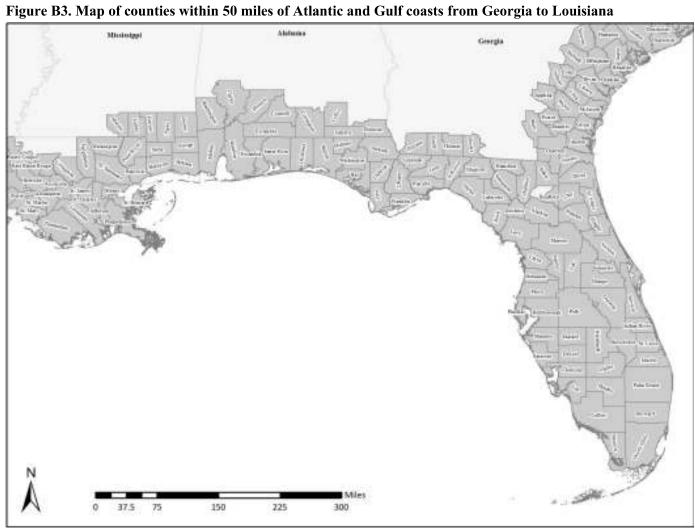
Appendix B: Maps of Counties in U.S. Coastal Regions



Figure B1. Map of counties within 50 miles of Atlantic coast from Maine to Virginia

North Carellina Georgia Miles 150 225 300

Figure B2. Map of counties within 50 miles of Atlantic coast from Virginia to Georgia



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300

Figure B4. Map of counties within 50 miles of Gulf Coast from Alabama to Texas

Casada

Figure B5. Map of counties within 50 miles of Great Lakes coast from New York to Michigan

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Figure B6. Map of counties within 50 miles of Great Lakes coast from Ohio to Minnesota

Figure B7. Map of counties within 50 miles of Pacific Coast from Washington to Northern California Shapt Chlan Workington. ire Pulk Oregon Believou Cottools 37.5 75 150 225 300

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California

California

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Figure B8. Map of counties within 50 miles of Pacific coast of California

Figure B9. Map of counties within 50 miles of coast of Alaska

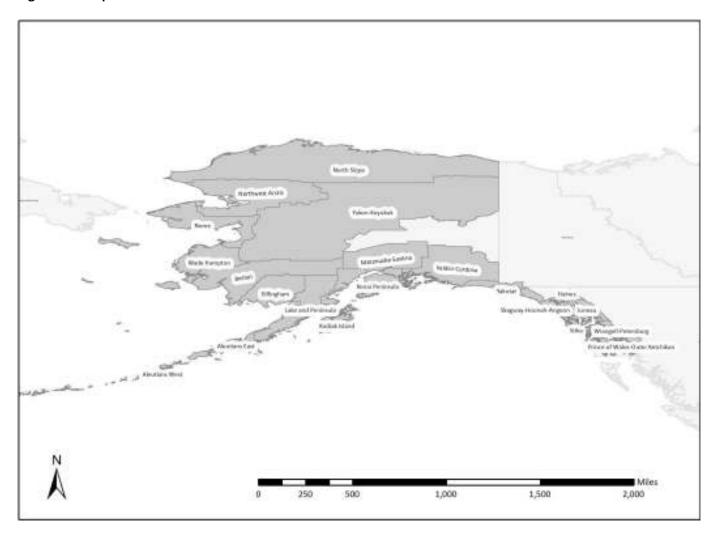
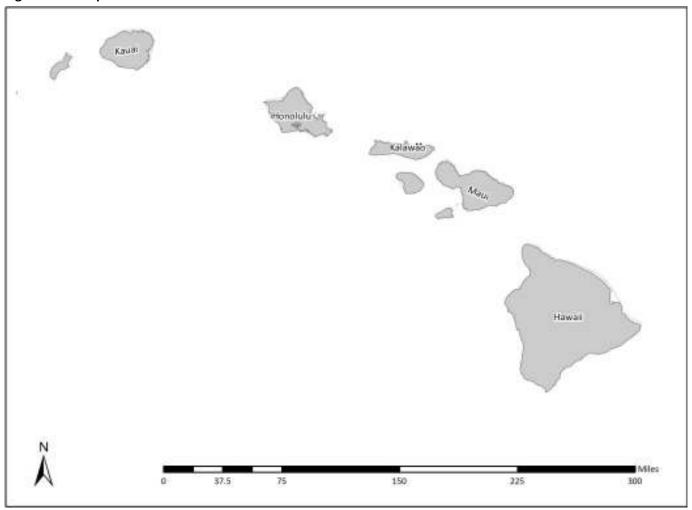


Figure B10. Map of counties within 50 miles of coast of Hawaii



The Sustainable Working Waterfronts Toolkit is available at:

http://www.WaterAccessUS.com

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