NOAA Report on the U.S. Ocean and Great Lakes Economy

Office for Coastal Management
ECONOMICS

NOAA's Office for Coastal Management

"Coastal management" is the term used by communities and organizations striving to keep the nation's coasts safe from storms, rich in natural resources, and economically strong.

The national lead for these efforts is the National Oceanic and Atmospheric Administration's Office for Coastal Management, an organization devoted to partnerships, science, and good policy. This agency, housed within the National Ocean Service, oversees major initiatives that include the Coral Reef Conservation Program, Digital Coast, National Coastal Zone Management Program, and National Estuarine Research Reserve System.

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Data Note: This report is based on 2013 Economics: National Ocean Watch (ENOW) data, produced by NOAA's Office for Coastal Management. The employment and gross domestic product (GDP) statistics are derived from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages data (accessed in August 2015) and the Bureau of Economic Analysis' GDP by State data (released in July 2015).

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Highlights

The U.S. ocean and Great Lakes economy, which focuses on six economic sectors that depend on the oceans and Great Lakes, is an important and resilient part of the national economy. In 2013, the ocean economy accounted for

- 149,000 business establishments
- 3.0 million employees
- $117 billion in wages
- $359 billion in gross domestic product

In 2013, employment in the ocean economy increased 3.0 percent (adding 87,000 jobs). This was much faster than the national average employment growth of 1.7 percent. While employment in the U.S. economy as a whole in 2013 was still below pre-recession levels, the ocean economy had fully recovered, with employment 5.5 percent higher than in 2007.

The ocean economy's contribution to gross domestic product was nearly flat between 2012 and 2013, growing by a mere 0.2 percent. This was significantly slower than the U.S. economy as a whole (which grew by 1.2 percent). However, in light of the dramatic increase in gross domestic product in 2012, it is worth noting that there was no correction in 2013. The 0.2 percent growth in 2013 indicates that the ocean economy retained the 10.5 percent gains in gross domestic product experienced in 2012.

In 2013, employment in the ocean economy grew by 3.0 percent—almost twice as fast as the U.S. economy as a whole.

Introduction

The oceans and Great Lakes support the lives, lifestyles, and livelihoods of all Americans. We fish from their waters, vacation on their edges, ship cargo on their surface, and extract oil, gas, sand, and gravel from their seafloors.

Ocean and Great Lakes-dependent activities are important contributors to the nation's economy. Oil and gas production provide energy. Seafood production and processing meet the demands of restaurants and seafood markets. Tourism and recreation support millions of part-time and entry-level jobs. Marine construction, marine transportation, and ship building provide access to global markets.

The oceans and Great Lakes also provide a wide range of benefits that, although real and fitting for economic consideration, do not lend themselves to traditional measures of jobs, wages, and gross domestic product. Coastal and ocean ecosystems sequester carbon from the atmosphere, protect communities from the harmful effects of coastal storms, and provide myriad other benefits that support human life and well-being.

This report provides insights into the benefits derived from the oceans and Great Lakes that result in jobs and wages and that contribute directly to the nation's gross domestic product. This focus should not be understood to mean that the benefits whose footprints show up well in market data are the largest or most important ones. Instead, data presented in this report should be taken for what they are—indicators of the impacts that oceans and Great Lakes resources and ecological systems have on the market economy of the United States, viewed through the lens of nationally consistent data produced by federal agencies.

Data presented in this report are from the National Oceanic and Atmospheric Administration's Economics: National Ocean Watch (ENOW) data set. ENOW data are produced by NOAA in Partnership with the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Bureau of the Census, and are derived from some of these agencies' most respected and commonly used data.

The consistency of ENOW's representation of the ocean economy with these data sets is one of its primary advantages. Another is the fact that it is produced in a manner that yields results that are comparable across time and from place to place. ENOW data are available for the years 2005 through 2013 for about 400 coastal counties, 30 coastal states, 8 regions, and the nation.

The ocean economy, as represented in the ENOW data, includes six economic sectors that depend in various ways on the oceans and Great Lakes:

- living resources
- marine construction
- marine transportation
- offshore mineral extraction
- ship and boat building
- tourism and recreation

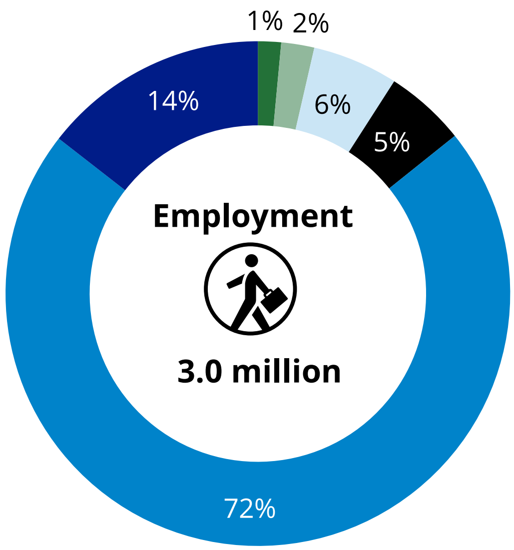
A review of this list underscores the complexity and importance of effective use, management, and governance of the oceans and Great Lakes. Some economic activities, like commercial fishing (part of the living resources sector), depend on the health of coastal and ocean ecosystems. Yet all of the sectors include activities that have the potential to harm these ecosystems, putting jobs, wages, and gross domestic product (as well has human life and well-being) at risk.

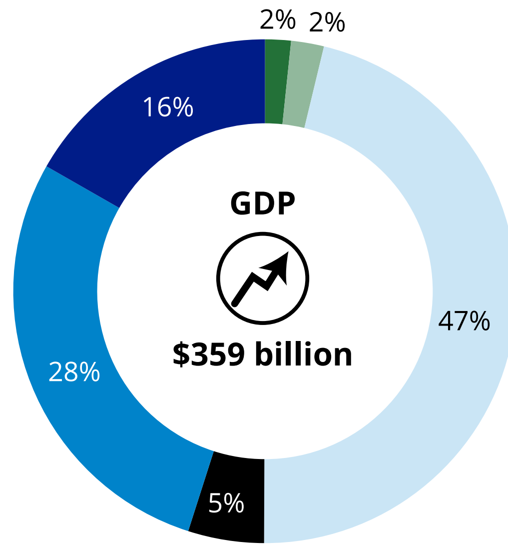
Maintaining the strength and sustainability of these ocean-based activities requires that we exercise good stewardship and care for the systems that support them.

2013 U.S. Ocean and Great Lakes Economy

National Summary

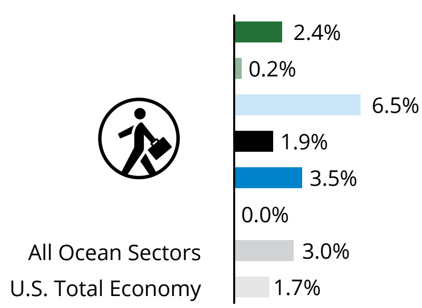
The ocean economy accounted for 2.2% of total employment and 2.2% of total GDP in the United States



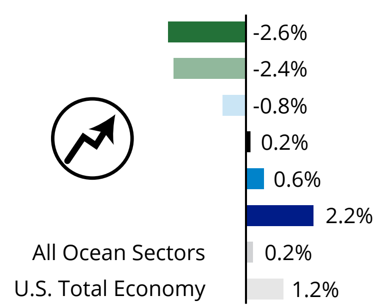


- Marine Construction
- Living Resources
- Offshore Mineral Extraction
- Ship and Boat Building
- Tourism and Recreation
- Marine Transportation

Annual Growth in Employment



Annual Growth in GDP



Economics: National Ocean Watch (ENOW)

coast.noaa.gov/digitalcoast/data/enow

National Profile

The Importance of the Ocean Economy

In 2013, the ocean economy's 149,000 business establishments employed more than 3 million people, paid over $117 billion in wages, and produced more than $359 billion in goods and services. This accounted for about 2.2 percent of the nation's employment and 2.2 percent of its gross domestic product.

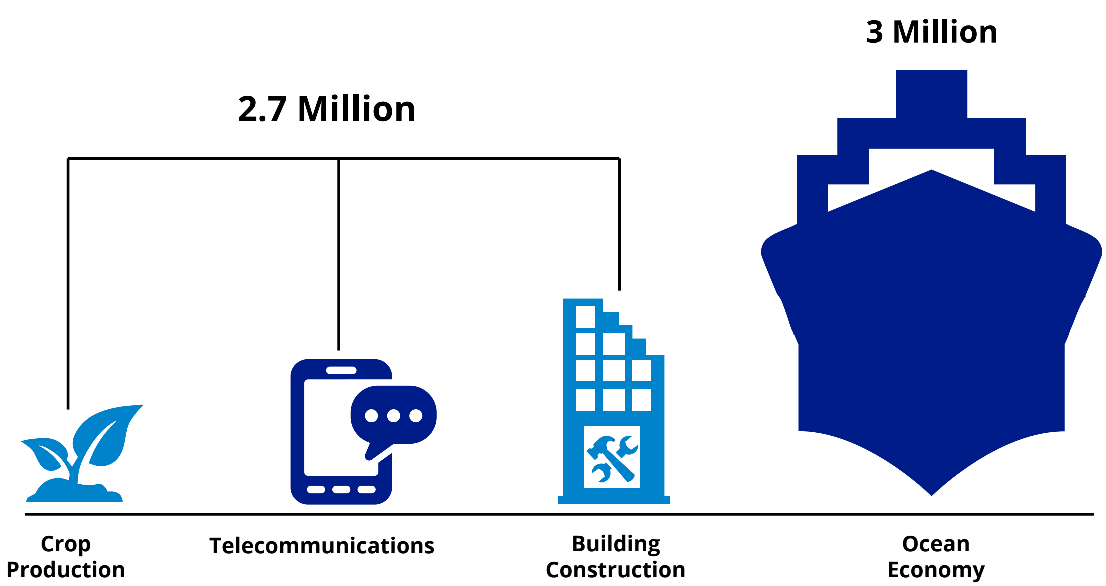
The U.S. ocean and Great Lakes economy accounted for

149,000	3 million	$117 billion	$359 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2013

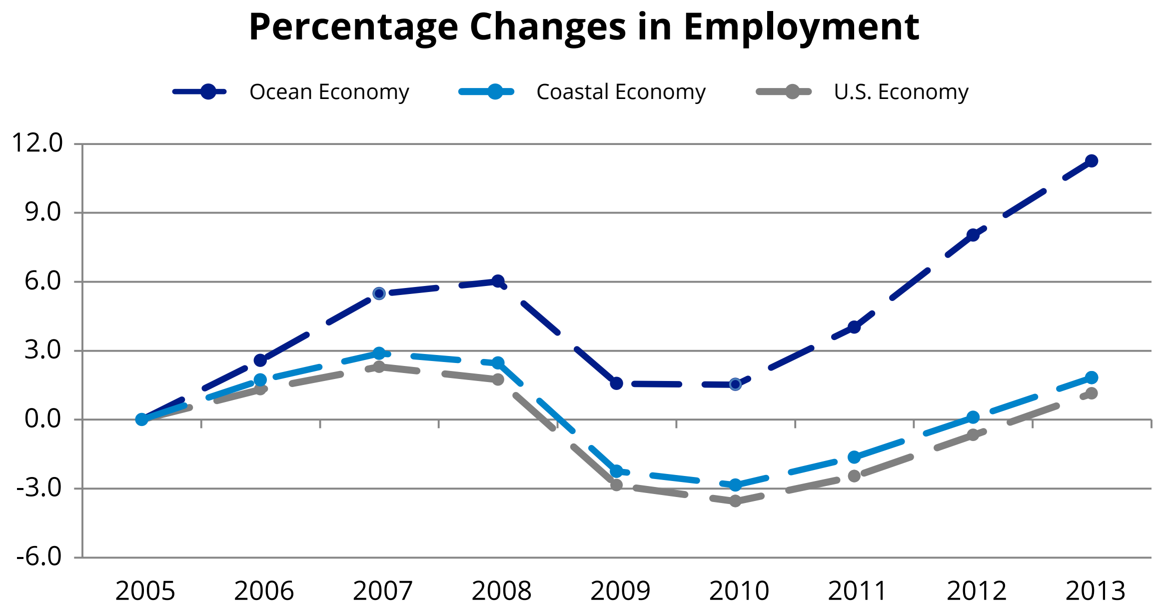
This seems small, but our nation's economy is diverse and includes many "small" but integral parts. Most people, for example, have some sense of the importance of better-known economic activities like crop production, telecommunications, and building construction. In 2013, the ocean economy employed more people than these three sectors combined.

U.S. Total Employment Comparison



The Resilience of the Ocean Economy

The ocean economy weathered the recession of 2007 to 2009 better than the U.S. economy as a whole.

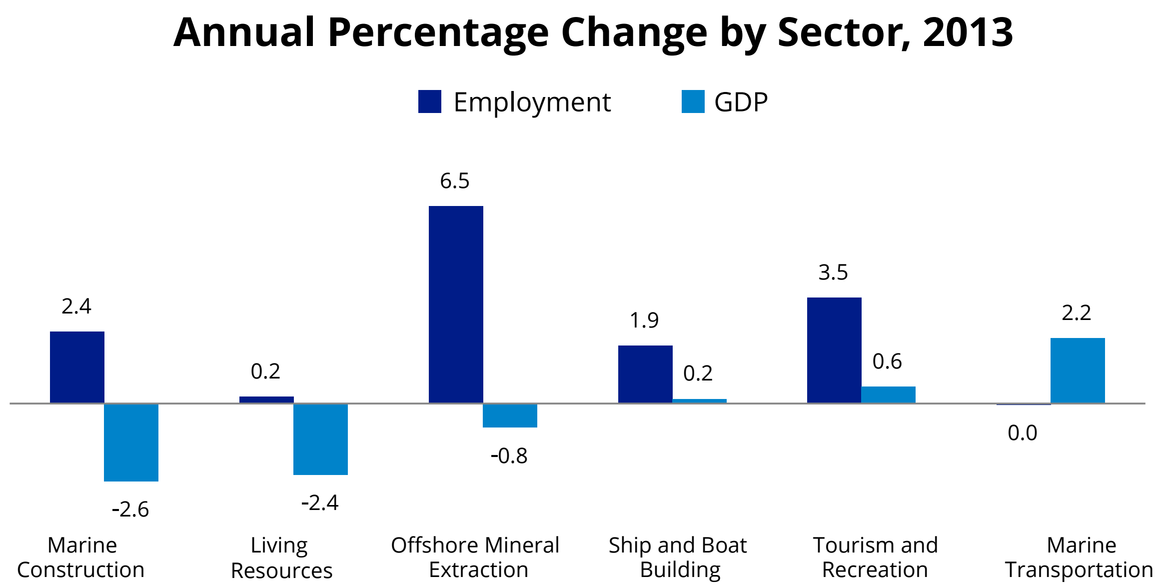


In 2013, employment in the ocean economy increased by 5.5 percent from pre-recession levels (2007), while employment of the U.S. economy as a whole was still about 1.0 percent lower than 2007. From 2012 to 2013, the ocean and Great Lakes economy gained about 87,000 employees, an increase of 3.0 percent—almost twice as much as the U.S. economy as a whole, which grew by 1.7 percent during the same period.

Trends in gross domestic product also show the resilience of the ocean economy. In 2013, inflation-adjusted gross domestic product in the ocean economy was 15.9 percent higher than pre-recession levels (2007), contrasted with a 4.1 percent increase in the U.S. economy as a whole. However, from 2012 to 2013, the ocean economy's inflation-adjusted gross domestic product was nearly flat (growing by 0.2 percent), compared to a 1.2 percent rate of growth experienced in the nation as a whole. It should be noted that gross domestic product in the ocean economy increased 10.5 percent in 2012, and in 2013 the ocean economy continued to generate goods and services at this much higher level.

The slow growth of the ocean economy's gross domestic product between 2012 and 2013 is largely due to a decline in gross domestic product in the offshore mineral extraction sector. Only the marine transportation sector generated growth in gross domestic product above the national average of 1.2 percent.

While gross domestic product for offshore mineral extraction declined, its employment grew, with a growth rate higher than any other ocean sector, at 6.5 percent. In absolute terms, employment in the tourism and recreation sector grew the most, adding about 73,000 jobs nationwide. Employment in three other ocean sectors grew faster than for the U.S. economy as a whole: marine construction, tourism and recreation, and ship and boat building. The living resources sector grew slower than the national average, but this represents a rebound for the third year in a row.



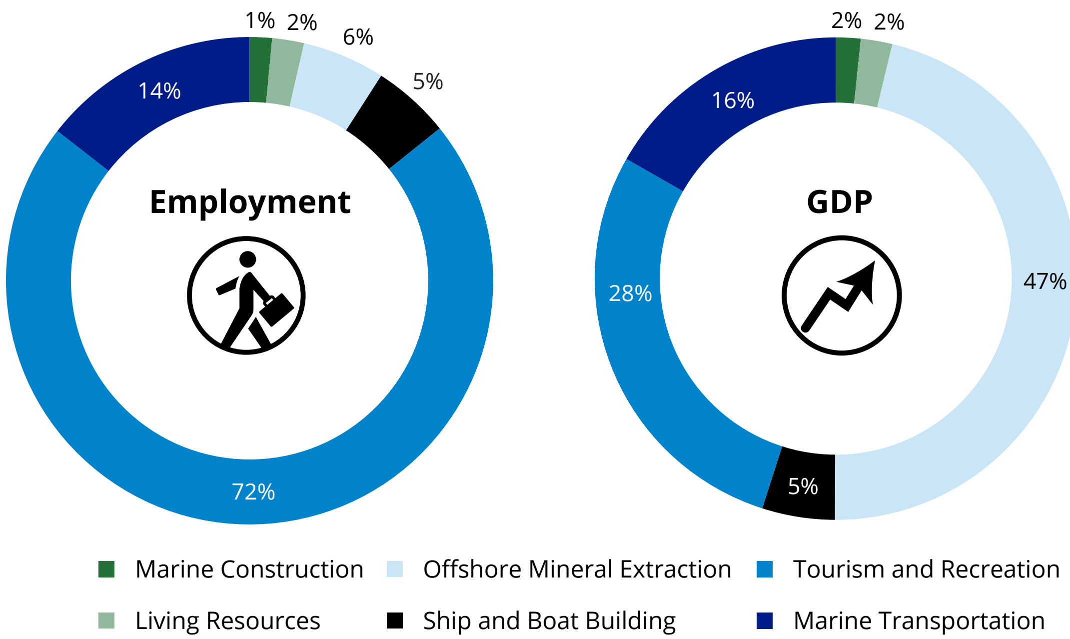
The Diverse Composition of the Ocean Economy

The six ocean-dependent sectors make very different contributions to the economy, as seen in the next figure, which compares measures of employment and gross domestic product. Some sectors, like tourism and recreation, include service-intensive activities that support a large number of jobs. Employment in this sector accounts for a much larger share of the ocean economy (71.6 percent) than would be expected in light of its much smaller contribution to gross domestic product. On the other hand, capital-intensive industries, like offshore mineral extraction, yield high levels of gross domestic product with a relatively small workforce. In 2013, offshore mineral extraction was the largest sector of the ocean economy in terms of gross domestic product (47.0 percent).

An important distinction should be made about the relationship of these economic activities to the ocean resources and ecological systems that support them. Some ocean sectors make non-consumptive use of the oceans. Marine transportation, ship and boat building, and marine construction are ocean-dependent because they require proximity to the ocean and involve activities that do not consume or “use up” ocean resources. Commercial fishing is an extractive activity. Fish are harvested from the ocean, but with proper management fish harvesting can be sustainable into the future. Offshore mineral extraction is different, being dependent on a very large but finite base of resources. Coastal tourism and recreation includes both consumptive uses of ocean resources (recreational fishing) and non-consumptive uses (beach-going).

The fact that all these activities take place in the same marine environment underscores the complexity and importance of effective use, management, and governance of the oceans and Great Lakes.

Employment and GDP by Ocean Sector



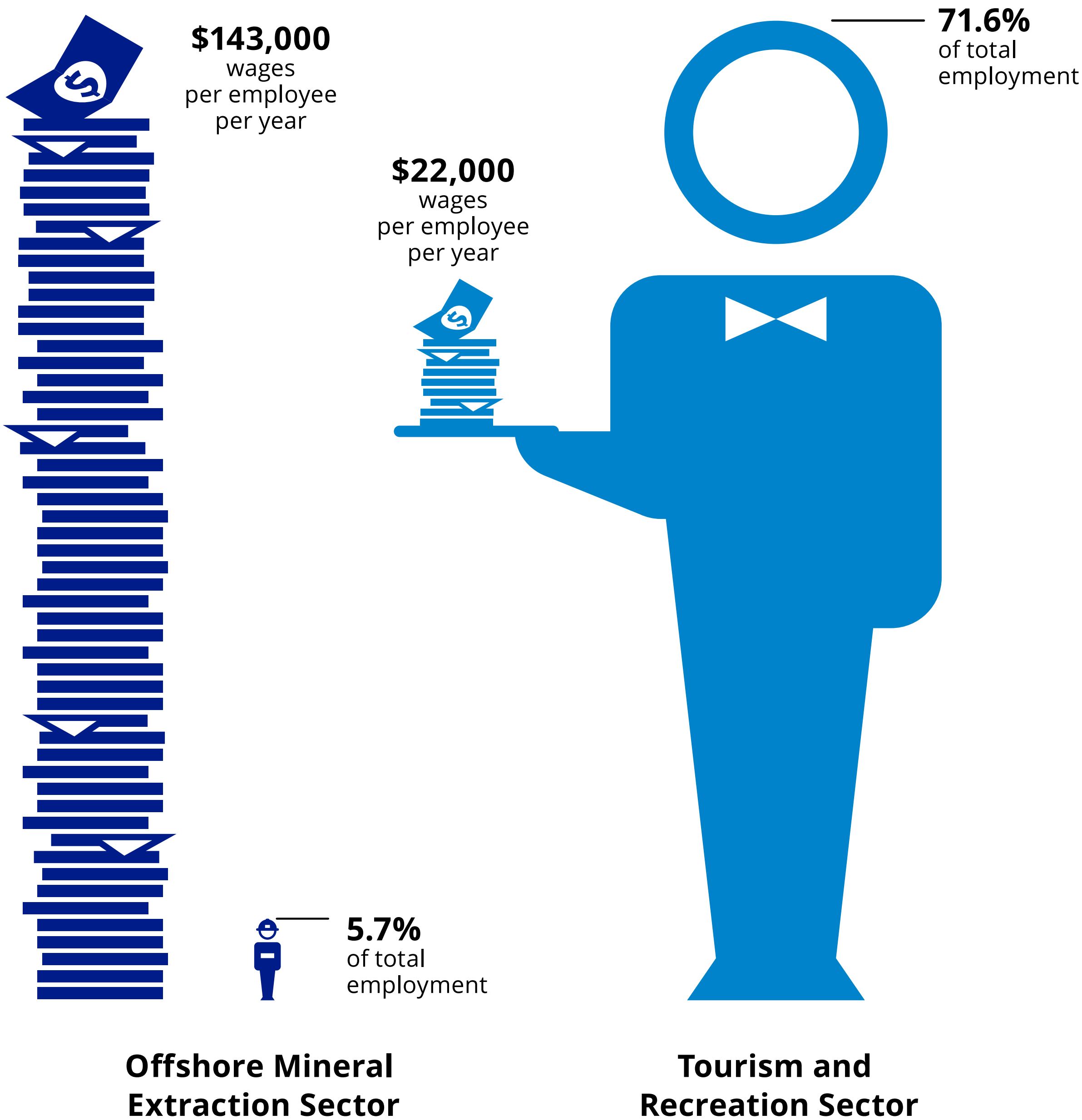
The Importance of Ocean-Dependent Jobs

Average wages across the ocean economy vary greatly. In 2013, offshore mineral extraction paid the highest wage per employee ($143,000) in the ocean and Great Lakes economy. The occupations represented in this sector range from the workers on offshore oil platforms to the engineers, geologists, and mappers who support exploration activities. The tourism and recreation sector paid the lowest average wages ($22,000) of all ocean economy sectors. This is partly due to the large share of part-time jobs, which are often held by students and others just entering the work force.[1]

The living resources sector also paid an average wage ($40,000) that was lower than the national average of $50,000. Similar to tourism and recreation, this sector employs a significant number of seasonal and part-time workers, most of whom are not highly paid. The three remaining sectors—marine construction, marine transportation, and ship and boat building—all paid wages that were higher than the 2013 national average.

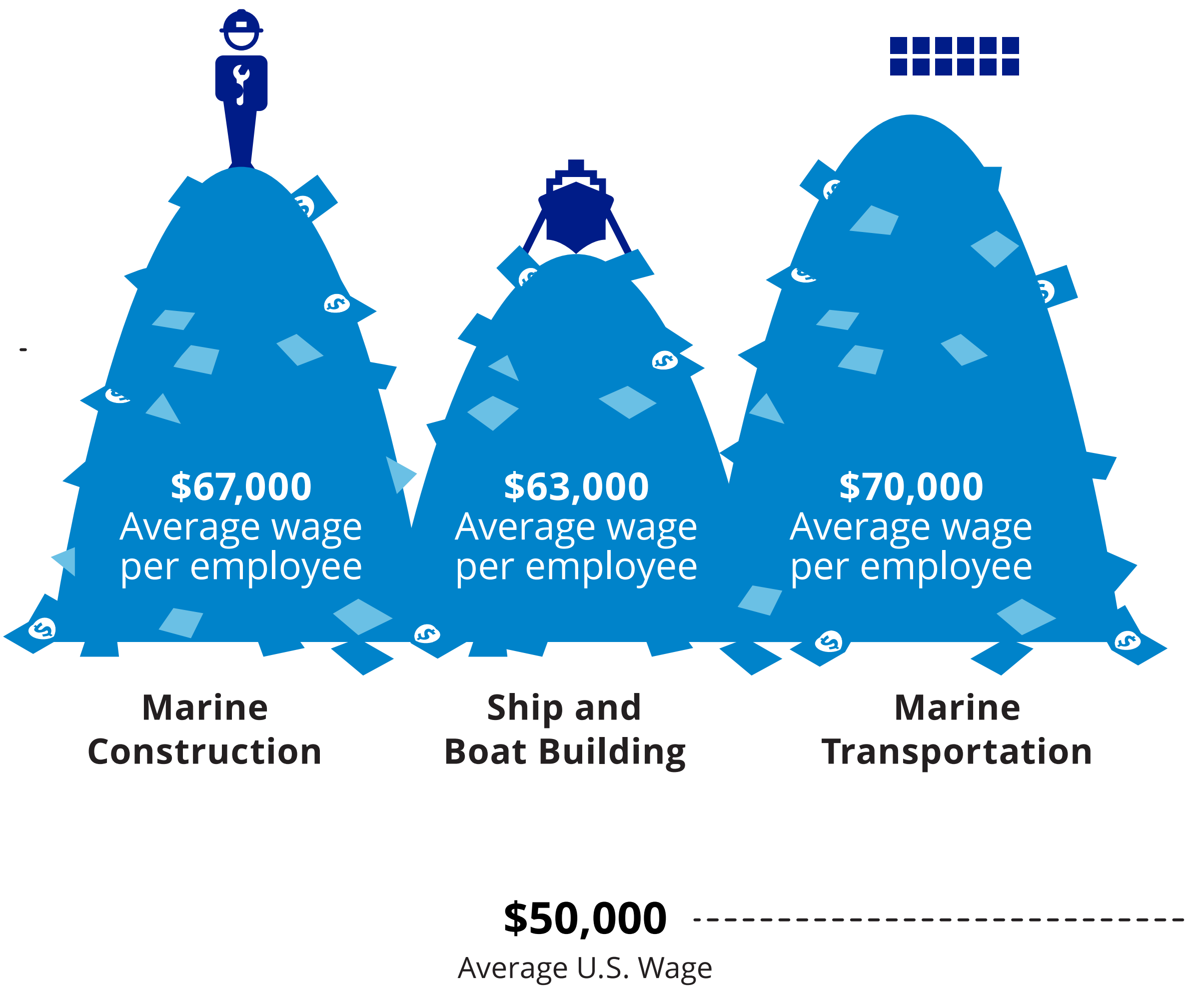
[1] U.S. Census Bureau. 2015. Quarterly Workforce Indicators (QWI) Data. Longitudinal-Employer Household Dynamics Program. Accessed at *http://lehd.ces.census.gov/data/#qwi*.

2013 Employment versus Wages



2013 Wages per Employee Working on the Water

All three sectors paid an average wage per employee above the national average of $50,000



Sector Profiles

Marine Construction

The marine construction sector accounts for the heavy construction activities associated with dredging of navigation channels, beach renourishment, and dock building. Although it would seem logical to include activities associated with the construction of oil and gas pipelines that directly support offshore oil and gas production, the underlying data are almost always suppressed because of the small number of businesses in any one area. In many cases, protecting the confidentiality of these businesses requires the suppression of the entire sector, including information for activities that could otherwise be reported. For this reason, these activities are not included in ENOW's data on the ocean economy. The effect of this omission is most prominent in the Gulf of Mexico and Alaska.

The Marine Construction Sector accounted for

44,000	$2.9 billion	$5.8 billion
Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2013

Marine construction accounted for 1.5 percent of the employment and 1.6 percent of the gross domestic product in the U.S. ocean and Great Lakes economy. While the sector represents a small percentage of the ocean economy, it is an integral component, paying one of the highest average wages per employee of $67,000, much higher than the national average of $50,000. Furthermore, dredging navigation channels and renourishing beaches are vital to the marine transportation and tourism and recreation sectors.

From 2012 to 2013, gross domestic product of this sector dropped at a rate of 2.6 percent, while the national gross domestic product grew by 1.2 percent. Since activity in this sector is affected, for example, by weather's influences on sedimentation and erosion, the level of activity tends to vary significantly, even at the national level. At the state and local levels, trends of marine construction activities are far more erratic, spiking and rapidly declining as major harbor dredging or beach renourishment projects are initiated and completed. Since important private sector components of this sector (oil and gas pipeline construction) are not reflected in the data, the effects of government spending decisions are another important factor in trends, often overshadowing general economic conditions.

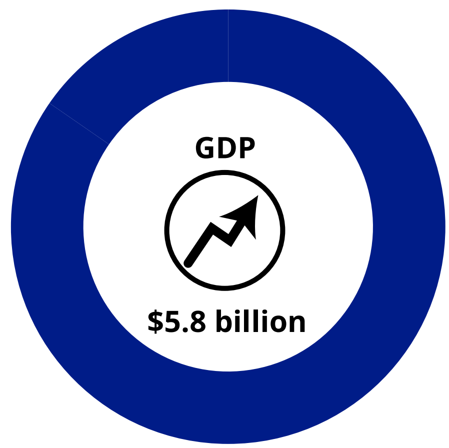
Marine construction activities occur in most regions of the U.S., but they are highly concentrated in Texas, Florida, California, and Louisiana, which together in 2013 accounted for about 60.4 percent of the employment and 57.6 percent of the gross domestic product in this sector.

2013 U.S. Ocean and Great Lakes Economy

Marine Construction

SECTOR SUMMARY

Marine construction accounted for 1.5% of total employment and 1.6% of total GDP in the ocean economy



Annual Growth in Employment

Annual Growth in GDP

Economics: National Ocean Watch (ENOW)

coast.noaa.gov/digitalcoast/data/enow

Living Resources

The living resources sector includes commercial fishing, aquaculture, seafood processing, and seafood markets.

The Living Resources Sector accounted for

62,000	$2.5 billion	$7.2 billion
Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2012

The living resources sector accounted for only 2.1 percent of the employment and 2.0 percent of the gross domestic product of the U.S. ocean and Great Lakes economy, with the second lowest average wage of the ocean sectors. However, it's important to remember that this relatively small sector accounts for all the seafood produced in the U.S. and, in this regard, is similar to the highly productive U.S. agriculture industry.

Seafood processing is the largest industry in the living resources sector, accounting for 60.2 percent of the sector's employment and 55.3 percent of the gross domestic product. This industry accounts for most of the employed workers in the sector.

From 2012 to 2013, employment in the sector grew by 0.2 percent, but gross domestic product (adjusted for inflation) fell by 2.4 percent. As with the oil and gas sector, gross domestic product in the living resources sector is sensitive to the price of the resource being harvested. This sector grew slower than the U.S. total economy, with the number of business establishments and employment well below pre-recession levels. However, in terms of employment, this sector has been slowly recovering from the recession, increasing three years in a row.

An important attribute of this sector is its reliance on the health of coastal and ocean ecosystems—wetlands that serve as habitat and feeding grounds for marine fish, estuaries that are the primary habitat for oysters and other shellfish, and the marine ecosystems where much of the finfish harvesting takes place. The health of these ecosystems can be affected by a wide range of other activities, including some ocean-dependent activities, which underscores the need for wise use, conservation, and management of ocean, coastal, and even upland resources.

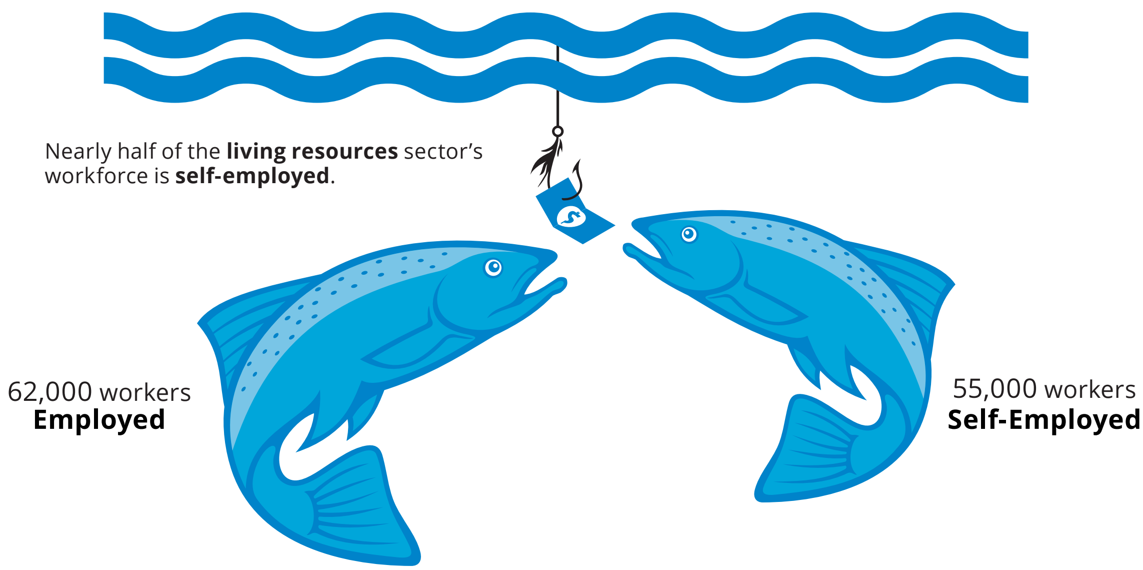
Another important feature of this sector is its cultural significance. Even where it accounts for a relatively small percentage of total employment, commercial fishing can be an important component of a community's identity, affecting the nature of "families, friends, schools, churches, politics, and social networks."[2] Lobster, crab, oysters, and finfish are important to cultural identities from Maine to the Chesapeake Bay, Apalachicola Bay, and Grays Harbor. Even seafood processing and marketing can shape cultural identities; consider the examples of Cannery Row in Monterey, California, and the Pike Place Market in Seattle, Washington.

[2] Jacob, Steve, Michael Jepson, and Frank L. Farmer. 2005. "What You See Is Not Always What You Get: Aspect Dominance as a Confounding Factor in the Determination of Fishing Dependent Communities." Human Organization. Volume 64, Number 4. Pages 374 to 385.

But perhaps the most distinctive attribute of this sector is the importance of self-employed workers in seafood harvesting. Even though fishing vessels require multiple crew members, they are frequently not employed by the owner but work for a share of the catch. At a national level, roughly half the workers in this sector are self-employed, most of whom work in fish harvesting (as opposed to seafood processing and marketing).

For this reason, NOAA has developed a complementary data set, ENOW for Self-Employed Workers, which is derived from the Nonemployer Statistics produced by the Bureau of the Census. In 2013, self-employed fishermen accounted for 55,000 jobs, bringing the total number of jobs in the living resources sector to almost 117,000.

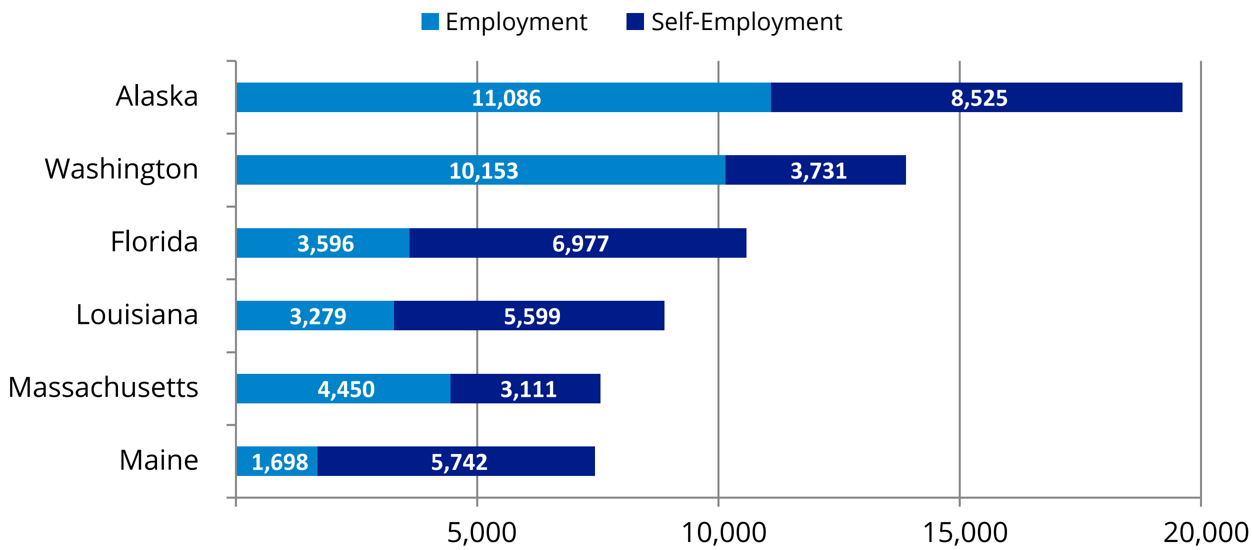
2013 Employed and Self-Employed



In 2013, more than $3.4 billion in gross receipts were reported by the self-employed in the living resources sector, larger than the amount of wages paid to employment in the same year. While these figures are not directly comparable (operating expenses are paid from gross receipts; this is not the case with wages), the gross receipts of the self-employed show the economic importance of this component of the sector.

The following chart shows the combined number of employed and self-employed workers in the living resources sectors. Measured in these terms, the leading centers of the living resources sector are Alaska and Washington. Both states have high levels of employment relative to self-employed workers. Self-employed workers in Florida, Maine, and Louisiana outnumber employees by large margins, largely because of self-employed workers in fish, oyster, and lobster harvesting.

Leading States in the Living Resources Sector



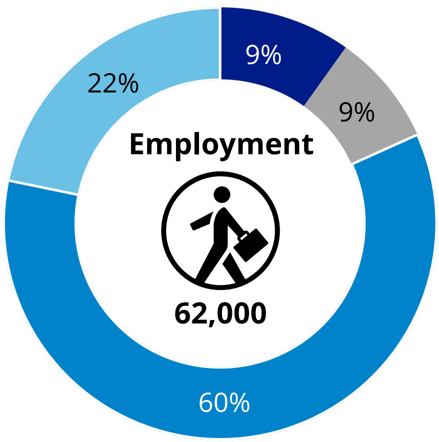
Since self-employed workers are such a large part of this sector, combining the self-employed workers with employed workers provides a more accurate and complete picture of the sector. The remainder of this report, however, looks exclusively at the component of ENOW data that focuses on businesses with employees, since self-employed workers account for only 4 percent of the total jobs in the ocean economy, with half of those jobs in the living resources sector.

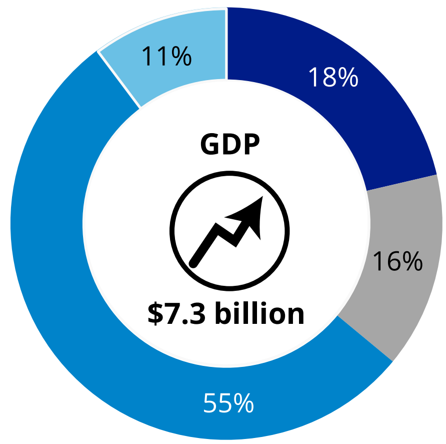
2013 U.S. Ocean and Great Lakes Economy

Living Resources

SECTOR SUMMARY

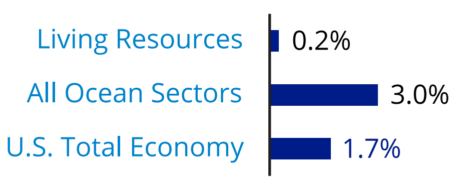
Living resources accounted for 2.1% of total employment and 2.0% of total GDP in the ocean economy





- Fishing
- Fish Hatcheries and Aquaculture
- Seafood Processing
- Seafood Markets

Annual Growth in Employment



Annual Growth in GDP

Economics: National Ocean Watch (ENOW)

coast.noaa.gov/digitalcoast/data/enow

Offshore Mineral Extraction

Offshore mineral extraction includes oil and gas exploration and production, as well as limestone, sand, and gravel mining in the coastal and marine environment. The largest component of this sector is oil and gas production, which is concentrated in the Gulf of Mexico region.

The Offshore Mineral Extraction Sector accounted for

153,000	**$24.4 billion**	**$169 billion**
Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2013

In 2013, offshore mineral extraction accounted for only 5.7 percent of the total employment in the ocean economy but contributed 47.0 percent of its gross domestic product. Average wages per employee of more than $143,000 per year were more than twice the national average, and that number was largely due to the high wages in the oil and gas exploration and production industry. Average wages per employee in the limestone, sand, and gravel industry were about $61,000, also higher than the national average.

Offshore mineral extraction is capital-intensive, requiring substantial investments in research, engineering, infrastructure, and operational equipment such as oceangoing vessels, and demanding comparably high skill sets that command high wages. The fact that much of the work takes place in hazardous conditions tends to further increase wages. The oil and natural gas extracted are sold at relatively high prices, which help account for the large contribution this sector makes to the ocean economy's gross domestic product.

Oil and gas exploration and production is the dominant industry in this sector, accounting for 96.5 percent of the employment and 98.9 percent of the gross domestic product in 2013. Limestone, sand, and gravel production is generally performed in support of construction activities and is, thus, widely distributed among the U.S. coastal states. Generally speaking, states with large economies and long coastlines, like California, Florida, and Texas, have the greatest production of sand, gravel, and limestone.

From 2012 to 2013, employment in the offshore mineral extraction sector grew by 6.5 percent, while gross domestic product fell by 0.8 percent. This decline is partly due to the declining oil production in some coastal states, especially in Alaska.[3] Future trends in this sector will likewise be driven by oil prices and production levels, which are more sensitive to global than national conditions.

The national center of the oil and gas industry is Houston, Texas. Harris County, Texas, alone accounted for 57.0 percent of the employment in the offshore mineral extraction sector and 73.0 percent of its gross domestic product.

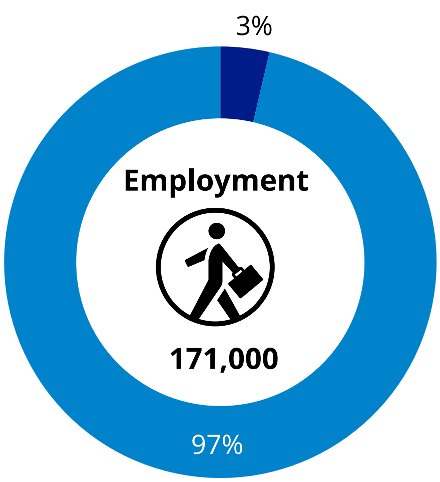
[3] U.S. Energy Information Administration. "Statistics on Petroleum and Other Liquids, March 2016." Accessed at *www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbl_a.htm.*

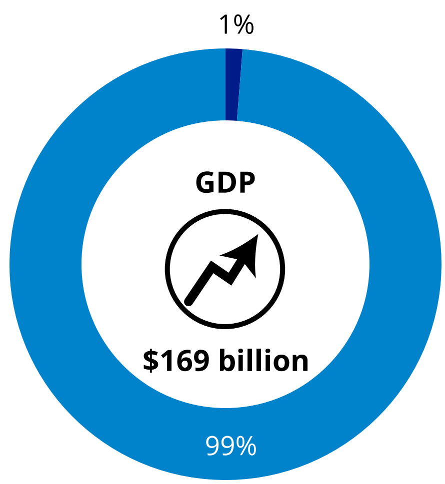
2013 U.S. Ocean and Great Lakes Economy

Offshore Mineral Extraction

SECTOR SUMMARY

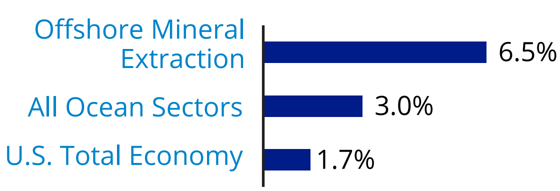
Offshore mineral extraction accounted for 5.7% of total employment and 47.0% of total GDP in the ocean economy





Limestone, Sand, and Gravel | Oil and Gas Exploration and Production

Annual Growth in Employment



Annual Growth in GDP

Economics: National Ocean Watch (ENOW)

coast.noaa.gov/digitalcoast/data/enow

Ship and Boat Building

This sector includes the construction, maintenance, and repair of ships, recreational boats, commercial fishing vessels, ferries, and other marine vessels. An important attribute of this sector is the concentration of large shipyards in a few locations around the country. However, boat building and repair activity is spread more evenly around the country, with concentrations in areas with high levels of commercial fishing and recreational boating.

In 2013, the ship and boat building sector accounted for 5.1 percent of the employment and 4.8 percent of the gross domestic product in the U.S. ocean and Great Lakes economy. Average wages per employee, of $63,000, were significantly higher than the national average of $50,000. The ship building, maintenance, and repair component of this sector accounted for about 85 percent of the employment and gross domestic product.

The Ship and Boat Building Sector accounted for

151,000	$9.7 billion	$17.3 billion
Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2013

The ship and boat building sector grew at a rate of 1.9 percent in employment and 0.2 percent in gross domestic product from 2012 to 2013. This more modest growth builds on growth of 4.5 percent in employment and 6.9 percent in gross domestic product in 2012. This sector has been experiencing some ups and downs over the years with a significant decline during the economic recession, particularly in the boat building industry.

Ship building, ship repairs, and to some extent boat building tend to be concentrated in a few areas around the country. Major shipyards, for example, are absent from most areas' ocean economies but, where they are present, they typically employ several thousand workers. But this sector also includes boat repair services—generally small businesses that are common in most areas that are frequented by recreational boats.

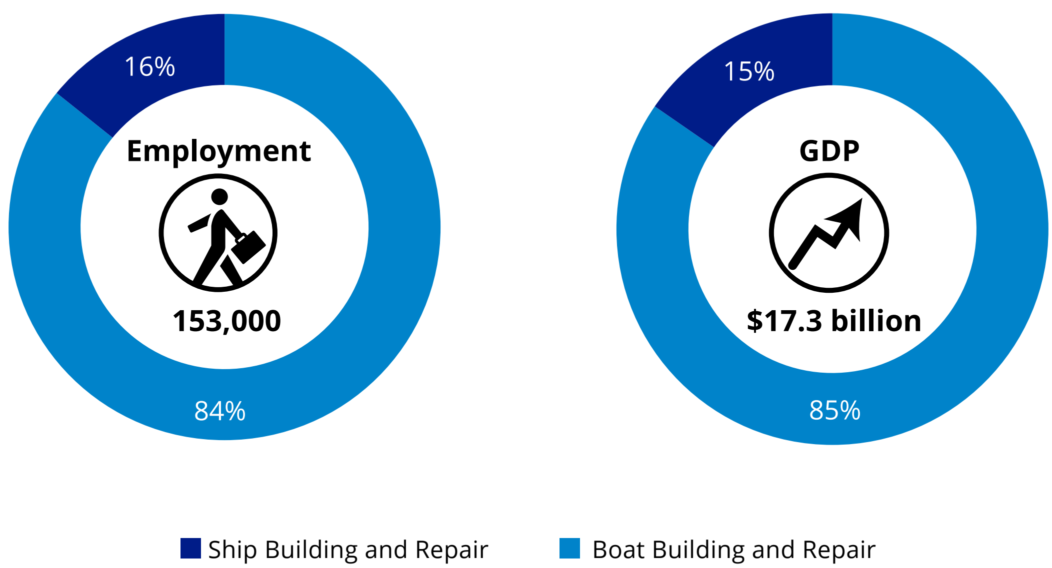
In 2013, Virginia contributed most to employment in this sector, accounting for 24.0 percent of the employment and 20.0 percent of the gross domestic product. Kitsap County, Washington, alone accounted for about 7.3 percent of the employment and 13.7 percent of the gross domestic product in the ship and boat building sector.

2013 U.S. Ocean and Great Lakes Economy

Ship and Boat Building

SECTOR SUMMARY

Ship and boat building accounted for 5.1% of total employment and 4.8% of total GDP in the ocean economy



Annual Growth in Employment

Annual Growth in GDP

Economics: National Ocean Watch (ENOW)

coast.noaa.gov/digitalcoast/data/enow

Tourism and Recreation

The tourism and recreation sector has more business establishments and employs more people than all the other five sectors combined but accounts for less than a third of the ocean economy's gross domestic product. This sector includes a wide range of businesses that attract or support ocean-based tourism and recreation: eating and drinking places, hotels and lodging, scenic water tours, aquariums, parks, marinas, boat dealers, recreational vehicle parks and campsites, and associated sporting goods manufacturing.

An important attribute of this sector is the seasonal nature of much of the activity and the large number of part-time employees that it supports. This, in part, accounts for the relatively low wages for employees in this sector. It should be noted, however, that workers in this sector are relatively young, with a large number of students to whom seasonal employment is ideally suited.

Another important attribute of this sector is the fact that many of the coastal and ocean amenities that attract visitors are free, generating no direct employment, wages, or gross domestic product. However, these "nonmarket" features are usually key drivers for all of the market-based activity. It should also be noted that the market-based aspects of this sector can be greatly affected by ecosystem health, water quality, and the associated aesthetics.

Since many of the activities associated with this sector, like hotels and restaurants, are not always ocean-dependent, only businesses located in shore-adjacent zip codes are included in county, state, and national statistics.

The Tourism and Recreaction Sector accounted for

2.1 millon	$45.7 billion	$97.1 billion
Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2013

The majority of the jobs are in hotels and restaurants in nearshore areas where many of the tourist attractions are located, with these two industries alone accounting for more than 90 percent of the employment and gross domestic product in this sector. Although the other industries are much smaller compared with hotels and restaurants—for example, aquariums, whale watching, and recreational fishing charters—they are arguably the drivers for tourists' visits to the coast. Vacationers stay at hotels and eat in restaurants, but the real attraction is the ocean-related recreational activities and the nonmarket activities like surfing and beach visitation.

This sector recovered rapidly from the economic recession. From 2012 to 2013, tourism and recreation gained 73,000 jobs, accounting for four-fifths of the of the employment growth in the ocean economy. Gross domestic product in the tourism and recreation sector declined during the economic recession but recovered the fourth year in a row at a rate of 0.6 percent in 2013.

The boat dealer industry has been declining since 2005, along with declines in the boat building industry, yet it first rebounded slightly in 2013.

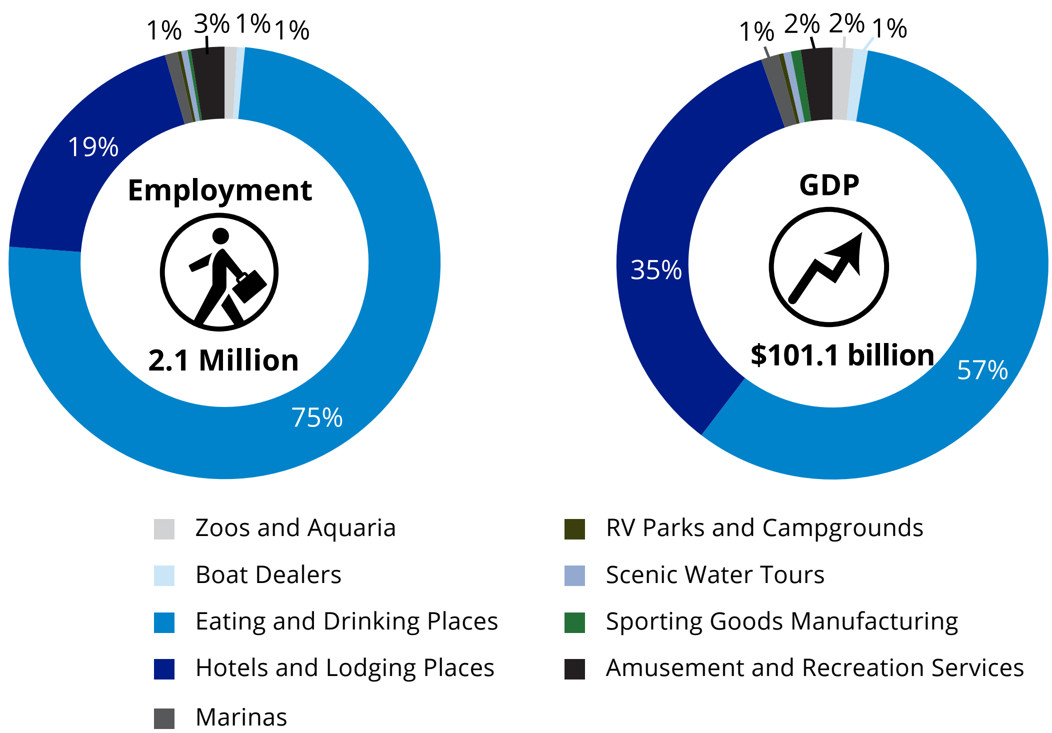
California and Florida are the two major contributors to the sector, accounting for more than one-third of this sector's total employment and gross domestic product in 2013.

2013 U.S. Ocean and Great Lakes Economy

Tourism and Recreation

SECTOR SUMMARY

Tourism and recreation accounted for 71.6% of total employment and 28.1% of total GDP in the ocean economy



Annual Growth in Employment

Annual Growth in GDP

Economics: National Ocean Watch (ENOW)

coast.noaa.gov/digitalcoast/data/enow

Marine Transportation

This sector includes businesses engaged in the traffic of deep-sea freight, marine passenger services, pipeline transportation, marine transportation services, warehousing, and the manufacture of navigation equipment. It accounted for 14.0 percent of the employment and 16.4 percent of the gross domestic product in the U.S. ocean and Great Lakes economy. While the sector represents a smaller percentage of the ocean economy than tourism and recreation or offshore mineral extraction, it is an integral component of the ocean economy, paying one of the highest average wages per employee, $70,000, in 2013.

The Marine Transportation Sector accounted for

422,000	$29.5 billion	$59.1 billion
Employees	Wages	Goods and Services

in the U.S. ocean and Great Lakes economy in 2013

Warehousing is the largest component of the marine transportation sector in terms of employment. To avoid overestimation, only warehousing activities located in shore-adjacent counties are included in the ENOW data.

Also, while these figures include economic activity associated with loading, unloading, and warehousing cargo and supporting its movement in and out of harbors, they do not include the value of the cargo itself. Including cargo values would not be an appropriate measure of the direct contribution of marine transportation to the national economy, but the $1.7 trillion of cargo moving through our ports each year is indicative of the large indirect effects of our coastal ports.[4] These effects are realized across the nation, accruing as benefits to the producers of agricultural and manufactured products that are sold in international markets and to the manufacturers and retailers whose businesses rely in part on imported goods.

In the marine transportation sector, about one-fourth of the employment and gross domestic product is supported by California. The rest is distributed across the rest of the nation, concentrated around its major seaports.

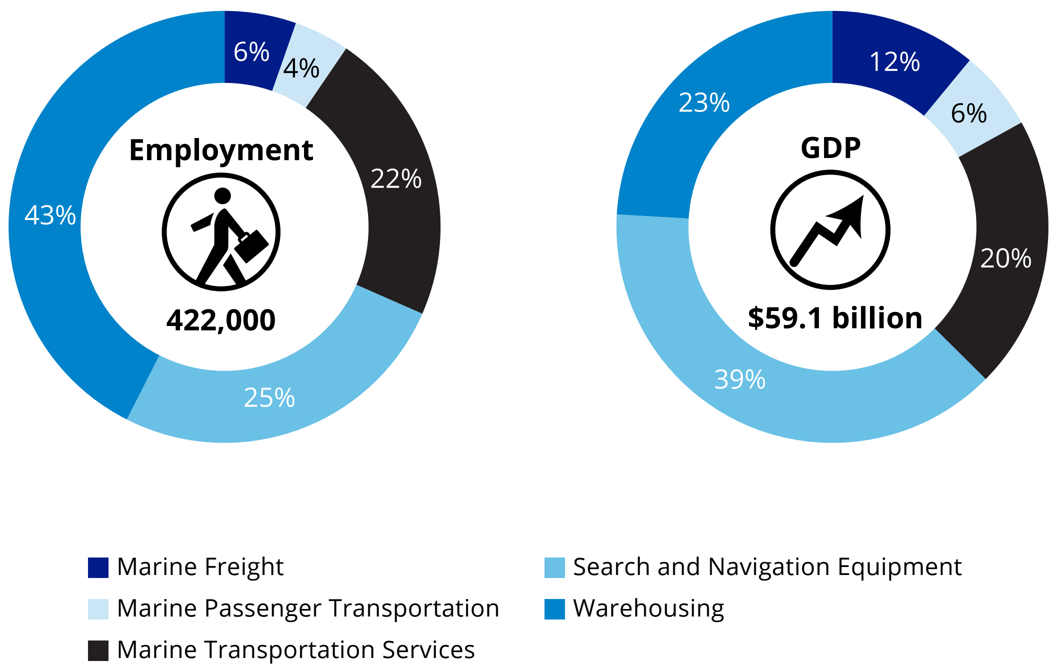
[4] U.S. Census Bureau. "FT920: U.S. Merchandise Trade: Selected Highlights, December 2013." Accessed at *www.census.gov/foreign-trade/Press-Release/2013pr/12/ft920/index.html*.

2013 U.S. Ocean and Great Lakes Economy

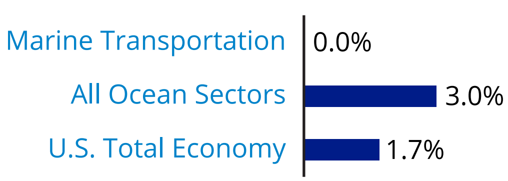
Marine Transportation

SECTOR SUMMARY

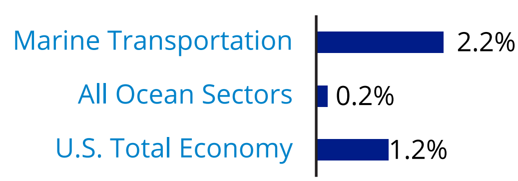
Marine transportation accounted for 14.0% of total employment and 16.4% of total GDP in the ocean economy



Annual Growth in Employment



Annual Growth in GDP



Economics: National Ocean Watch (ENOW)

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