NOAA Report on the U.S. Marine Economy

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 sound 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 2018 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 August 2021) and the Bureau of Economic Analysis' GDP by State data (released June 2021).

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Executive Summary

When communities face tough times, economic data are used to guide the decisions and investments designed to bolster economic resilience. This report provides statistical information and insights about the marine economy—the jobs, gross domestic product (GDP), establishments, and wages in the economy that depend on the nation's oceans and Great Lakes. The marine economy is made up of six economic sectors:

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

This report presents data from the year 2018, which is the most current information available.

Report Highlights

In 2018, the marine economy accounted for

- 162,000 individual business establishments,
- 3.4 million employees,
- $140 billion in wages, and
- $346 billion in goods and services (gross domestic product).

All of these represent increases from the previous year.

Employment in the marine economy increased 3.1 percent (adding 102,000 jobs), which is faster than the national average employment growth of 1.6 percent during the same reporting period. To put that in context, here's a comparison: the marine economy employed more people (3.4 million) than the combined crop production, telecommunication, and building construction sectors (2.9 million).

Marine construction showed the most growth in 2018 compared to 2017; employment and GDP in this sector increased by 6.2 percent and 6.5 percent, respectively. Tourism and recreation, ship and boat building, and marine transportation also saw increases in both employment and GDP percentages. Simply put, the marine economy is big, complex, diverse—and growing.

Using the Data, and Why They Matter

These data allow stakeholders to establish a baseline for economic growth discussions and track or show changes in GDP, establishments, employment, and wages over time. The level of granularity available provides a unique resource for people who want to invest in, understand, and advocate for our nation's marine resources.

Rising seas, storms, and coastal flooding make these data even more important. Coastal residents, homeowners, and businesses are facing increasing frequency and intensity of storms, rising sea levels, and coastal inundation. Marine industries and the economies they support inherently depend on close proximity to the water's edge. They are facing more and more questions on how to rebuild, where to do so, and the associated costs—so new strategies are needed if these businesses are to remain resilient in the face of future challenges.

Whenever important decisions are made that affect a community's future, economic data are needed. After all, communities cannot manage what they cannot count.

Marine economy data are helpful when advocating for a particular industry, and they are used to track economic health over time. These data are also factored in when making decisions about natural resources, because a threat to natural resources is also a threat to the marine economy.

Ultimately, this report helps frame nationally relevant discussions about the importance of the marine economy and its future in the face of dynamic coastal changes.

About the Data

The national-level data in this report come from NOAA's Economics: National Ocean Watch (ENOW) project, a collection of marine-focused economic data that span 2005 through 2018. In addition to the longitudinal data, these data are also available at a more refined scale for 402 coastal counties, 30 coastal states, and eight regions. This report presents data from 2018, the most current information available. ENOW is produced by NOAA in partnership with the Bureau of Economic Analysis, Bureau of Labor Statistics, and the U.S. Bureau of the Census.

An alternative source for U.S. marine economy statistics that provides national, non-inflation-adjusted data can be found at *bea.gov/data/special-topics/marine-economy*. This data source provides information for ten marine sectors and uses a different methodology than is featured here, and it spans 2014 through 2019.

Special Notes

Causality

Understandably, readers will likely want to pinpoint *why* portions of the U.S. marine economy changed during the reporting period. In this complex and macroeconomic system made up of many inputs and outputs, these relationships can be challenging to tease out. The aim of this report is not to identify the "why," but to create a baseline that communities can use to better understand how their marine economy is tracking over time.

COVID-19

The figures reported here lag by three years because they come from the most recently available datasets. The COVID-19 impacts from 2020 are not reflected yet in these data, nor in this year's report. That said, this lag underscores how these data serve as a baseline for communities, states, and national stakeholders to understand how the marine economy in the United States fared before this global shock. Subsequent years of data will shed light on the depth and breadth of the COVID-19 impact on the U.S. marine economy.

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.

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

The marine environment also provides 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 marine 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 marine economy 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 marine 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) dataset. ENOW data are produced by NOAA in partnership with the Bureau of Economic Analysis, Bureau of Labor Statistics, and 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 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. Gross domestic product figures are also updated each year so that the results are consistent with the Bureau of Economic Analysis' annual improvements of national industrial data. ENOW data are available for the years 2005 through 2018 for about 400 coastal counties, 30 coastal states, 8 regions, and the nation.

The marine economy, as represented in the ENOW data, includes six economic sectors that depend in various ways on the marine environment:

- 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 marine economy. Some economic activities, such as commercial fishing (part of the living resources sector), depend on the health of marine ecosystems. Other marine economic activities, such as marine transportation and activities that occur at working waterfronts, rely on a close physical proximity to the coastline, presenting an increasing suite of challenges as these businesses encounter sea level rise, increasing storms, and other hazards. At the same time, all of the sectors include activities that have the potential to harm these ecosystems, putting jobs, wages, and gross domestic product (as well as human life and well-being) at risk.

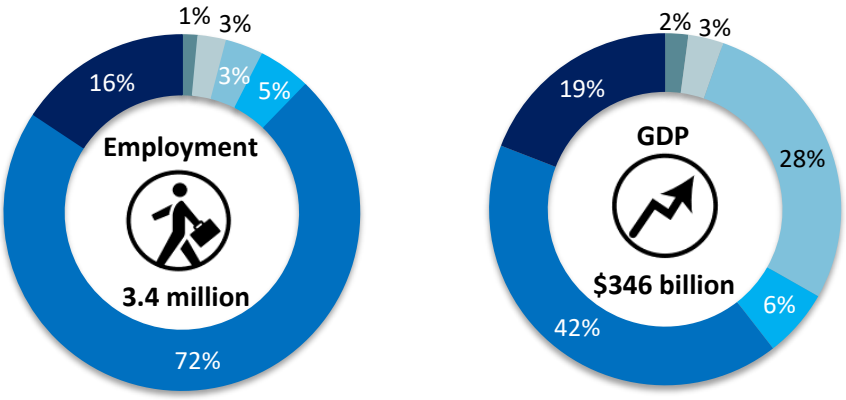
Maintaining the strength and sustainability of marine-based activities requires that communities exercise good stewardship and care for the systems that support the marine economy.

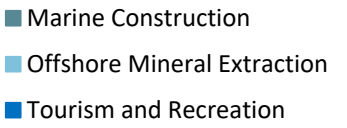
2018 U.S. Marine Economy

National Summary

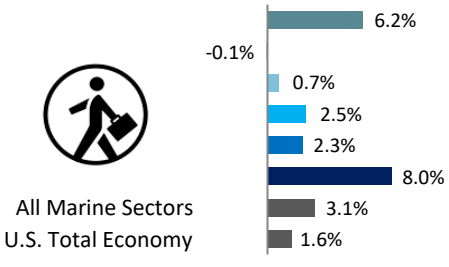
Annual Totals

The marine economy accounted for 2.3% of total employment and 1.7% of total GDP in the United States

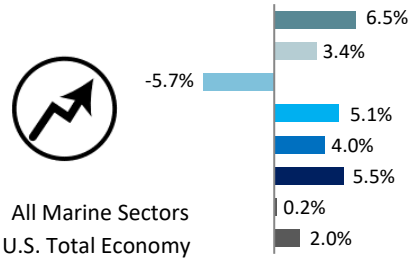




Annual Changes in Employment, 2017-2018



Annual Changes in GDP, 2017-2018



Economics: National Ocean Watch (ENOW)
coast.noaa.gov/digitalcoast/data/enow.html

Note: Seafood wholesale activities were added to the living resources sector data from 2016 onward.

National Profile

The Importance of the Marine Economy

The U.S. marine economy accounted for

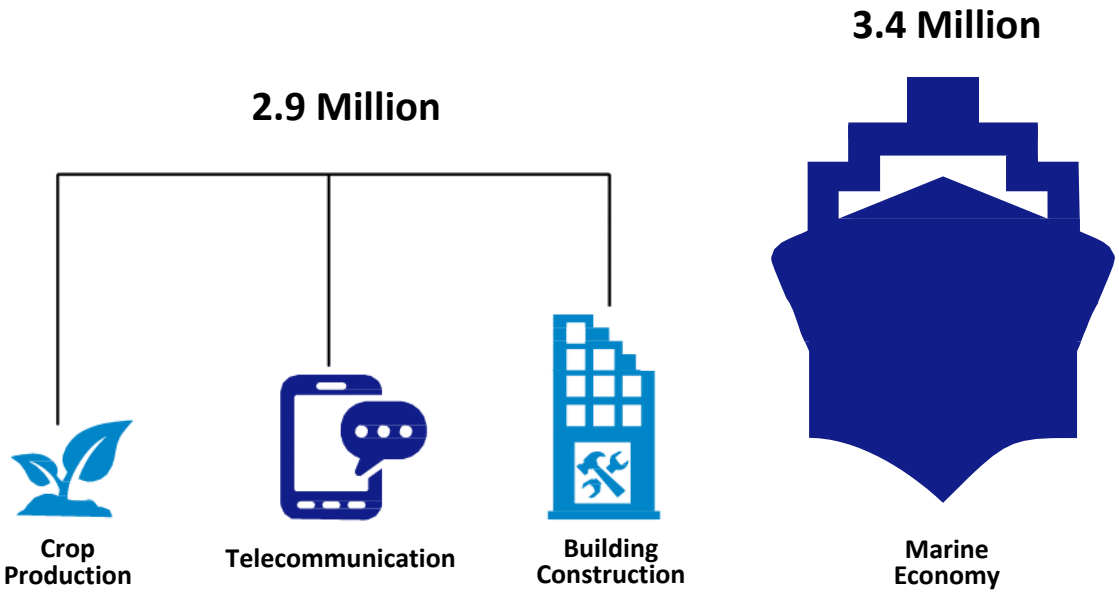
162,000	3.4 million	$140 billion	$346 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. total economy in 2018

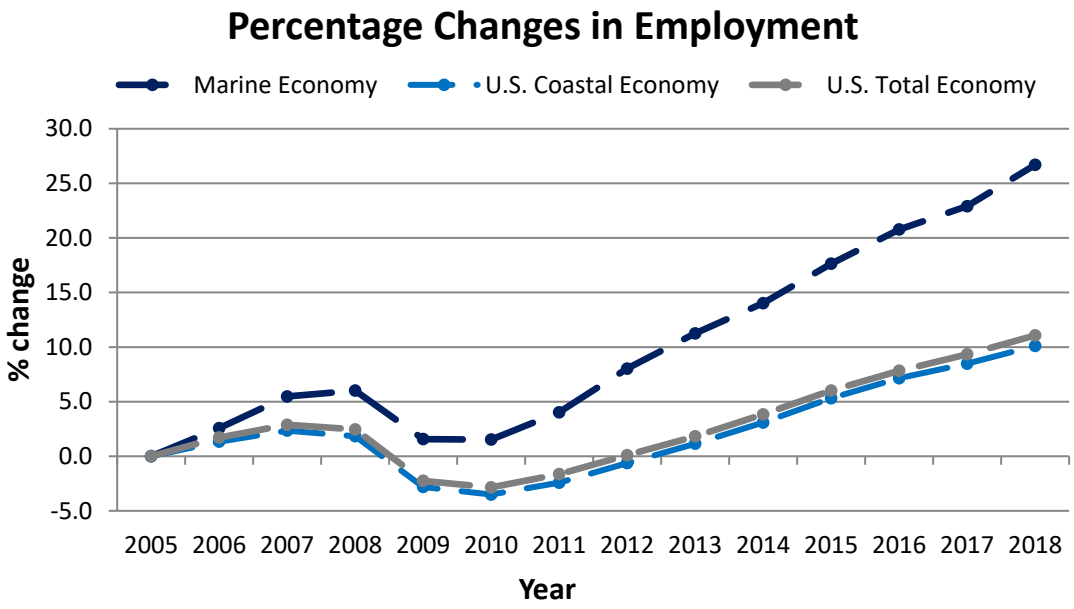
In 2018, the marine economy's 162,000 business establishments employed about 3.4 million people, paid $140 billion in wages, and produced $346 billion in goods and services, or gross domestic product (GDP). This accounted for about 2.3 percent of the nation's employment and 1.7 percent of its GDP.

This may seem 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 such as crop production, telecommunication, and building construction. In 2018, the marine economy employed more people than these three sectors combined.

U.S. Total Employment Comparison



The Resilience of the Marine Economy



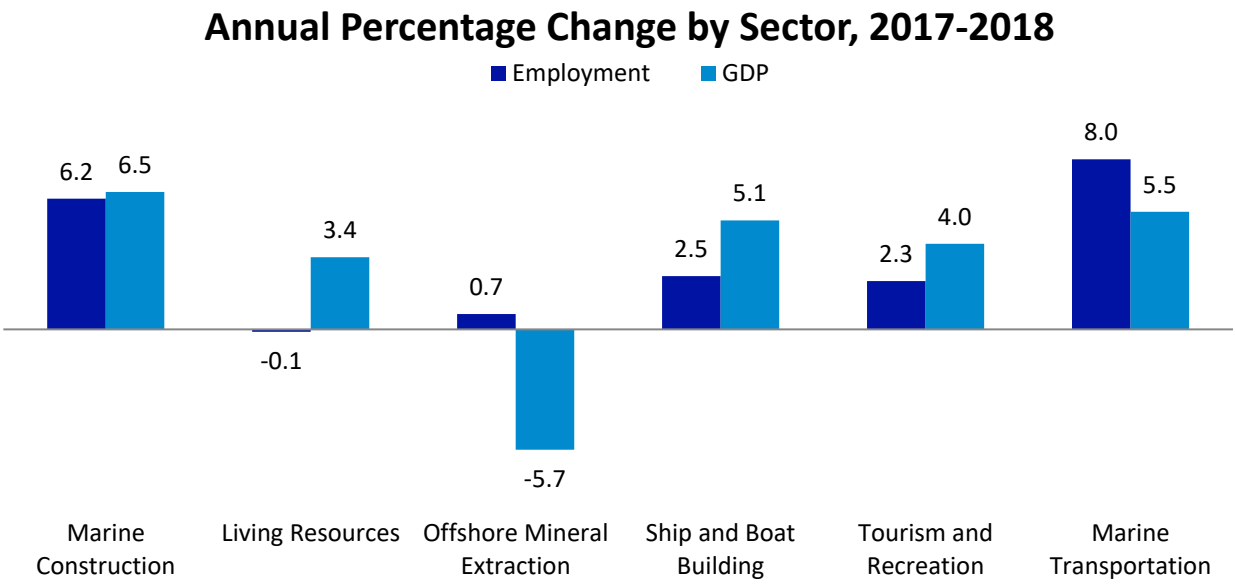
From 2017 to 2018, the marine economy gained about 102,000 employees, an increase of 3.1 percent—more than the U.S. economy as a whole, which grew by 1.6 percent during the same period. As illustrated above, the marine economy not only weathered the 2008 recession better than the U.S. coastal economy,[1] but it also continued to track, while growing at a faster rate over time, even into 2018. Looking ahead in future years, the coastal economy may fare better in its recovery from the COVID-19 pandemic.

Trends in gross domestic product also show the resilience of the marine economy. In 2018, oil prices fell back to 2017 price levels after a peak for much of the year relative to 2017,[2] helping to contribute to a change in the inflation-adjusted (hereafter, "real") gross domestic product of the offshore mineral extraction sector (decreased 5.7 percent) and the U.S. marine economy as a whole (increased 0.2 percent). Removing the offshore mineral extraction sector from the total, gross domestic product in the remainder of the U.S. marine economy grew by 1.0 percent. Employment in the marine transportation sector showed the highest rate of increase (8.0 percent). The tourism and recreation sector added the greatest number of jobs (55,000) in 2018.

In 2018, four of the six marine economy sectors—marine construction, ship and boat building, tourism and recreation, and marine transportation—experienced expansion in both gross domestic product and employment.

[1] U.S. coastal economy represents the total economy in the shoreline counties.

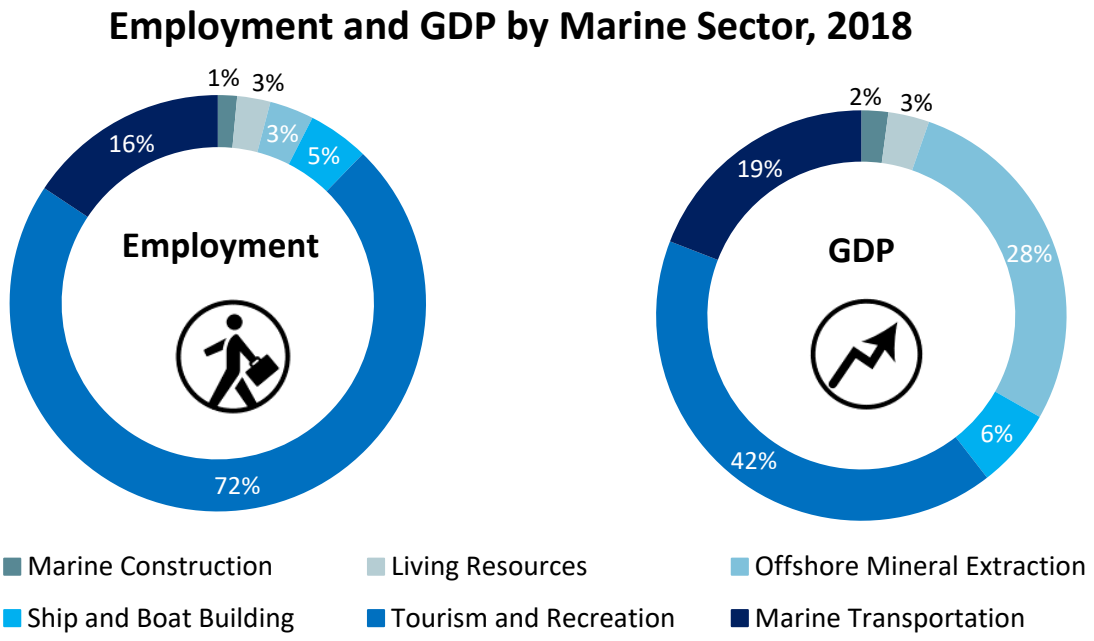
[2] U.S. Energy Information Administration. "U.S. Average Retail Gasoline Prices Ended the Year Lower Than They Started." Accessed at *https://www.eia.gov/todayinenergy/detail.php?id=37872*.



The Diverse Composition of the Marine Economy

The six marine sectors make very different contributions to the economy, as seen in the next figure, which compares employment and gross domestic product. Some sectors, such as 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 marine economy (72.1 percent) than would be expected in light of its much smaller contribution to gross domestic product (41.4 percent). On the other hand, capital-intensive industries, such as offshore mineral extraction, yield high levels of gross domestic product with a relatively small share of the marine economy's workforce (3.4 percent). In 2018, offshore mineral extraction accounted for 27.9 percent of the marine economy's gross domestic product, second only to tourism and recreation.

An important distinction should be made about the relationship of these economic activities to the marine 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 marine-dependent because they require proximity to the marine environment and involve activities that do not consume or "use up" marine resources. It is important to note that these sectors also face particular constraints in the face of rising seas and coastal hazards. 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 marine resources (recreational fishing) and non-consumptive uses (beachgoing).



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

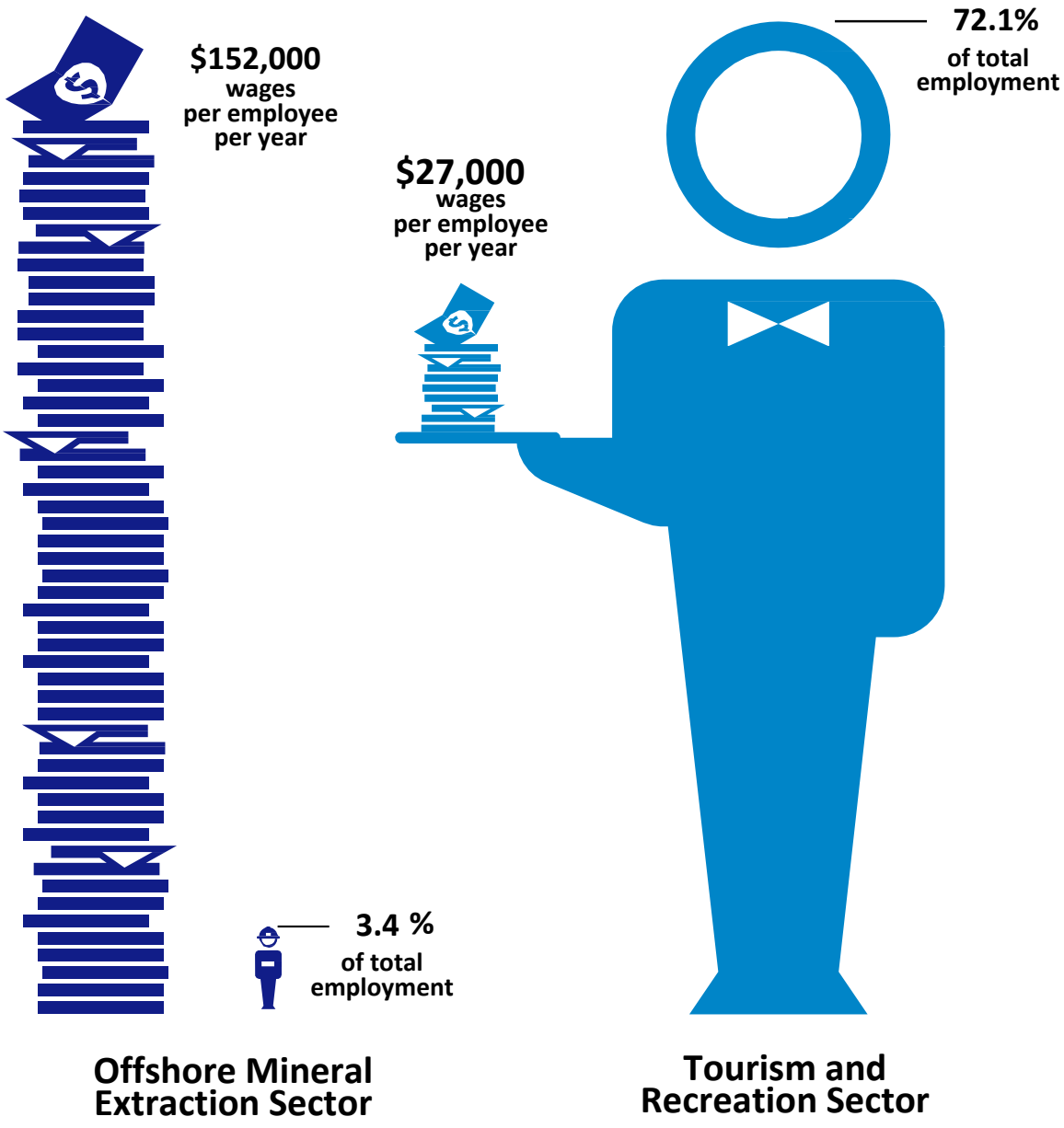
The Importance of Marine-Dependent Jobs

Average wages for different types of jobs within the marine economy vary greatly. In 2018, offshore mineral extraction paid the highest wage per employee ($152,000). 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 wage ($27,000) of all marine economy sectors. This low wage is partly due to the large share of part-time jobs here, which are often held by students and others just entering the workforce.[3]

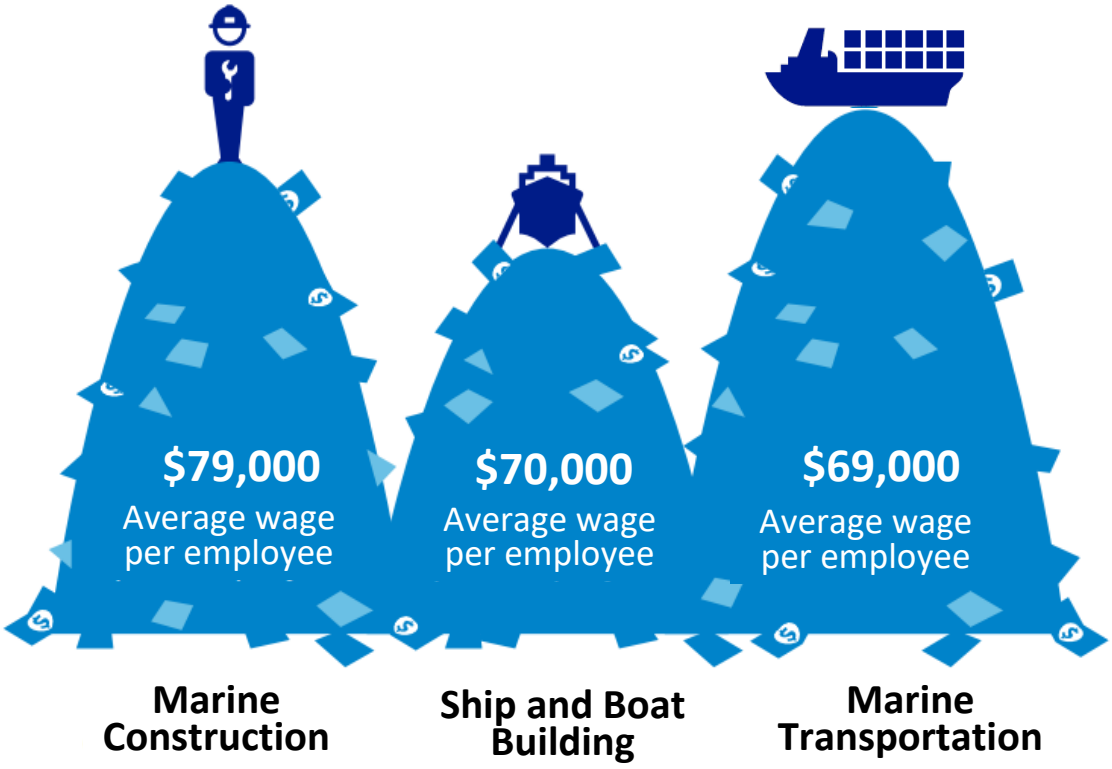
The living resources sector also paid an average wage ($48,000) that was lower than the national average of $54,000. Similar to tourism and recreation, this sector employs a significant number of seasonal and part-time workers, most of whom are not highly paid. The three remaining sectors—marine construction, marine transportation, and ship and boat building—all paid wages that were higher than the 2018 national average.

[3] U.S. Census Bureau. 2018. Quarterly Workforce Indicators (QWI) Data. "Longitudinal-Employer Household Dynamics Program." Accessed at *http://lehd.ces.census.gov/data/#qwi*.

2018 Employment versus Wages



2018 Wages per Employee Working on the Water



Sector Profiles

Marine Construction

The Marine Construction Sector accounted for

3,125	50,819	$4.0 billion	$7.3 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. marine economy in 2018

This sector accounts for the heavy construction activities associated with dredging navigation channels, beach renourishment, and dock building. Although it seems logical to include activities associated with the construction of oil and gas pipelines, these data are almost always suppressed because of the small number of businesses in any one area. Protecting the confidentiality of these businesses often 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 marine economy. The effect of this omission is most prominent in the Gulf of Mexico and Alaska. Notably, this sector is inherently subject to increased prominence in the face of climate change and a demand from communities to recover. These towns respond to storm events by rebuilding beaches, fortifying structures and docks against increased wave action, or removing silt after record-breaking storms in efforts to maintain or increase their resilience.

Marine construction accounted for 1.5 percent of the employment and 2.1 percent of the gross domestic product in the U.S. marine economy. While the sector represents a small percentage of the marine economy, it is an integral component, paying one of the highest average wages per employee of $79,000, much higher than the national average of $54,000. Furthermore, dredging navigation channels and renourishing beaches are vital to the marine transportation and tourism and recreation sectors.

Since activity in this sector is affected by weather influences on sedimentation and erosion, and federal, state, and local governments' ability to fund new projects, the level of activity tends to vary significantly, even at the national level. From 2017 to 2018, employment in this sector increased by 6.2 percent, while gross domestic product increased by 6.5 percent. At the state and local levels, trends are far more erratic, spiking and rapidly declining as major harbor dredging or beach renourishment projects are initiated. 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 represent an important factor, often overshadowing general economic conditions.

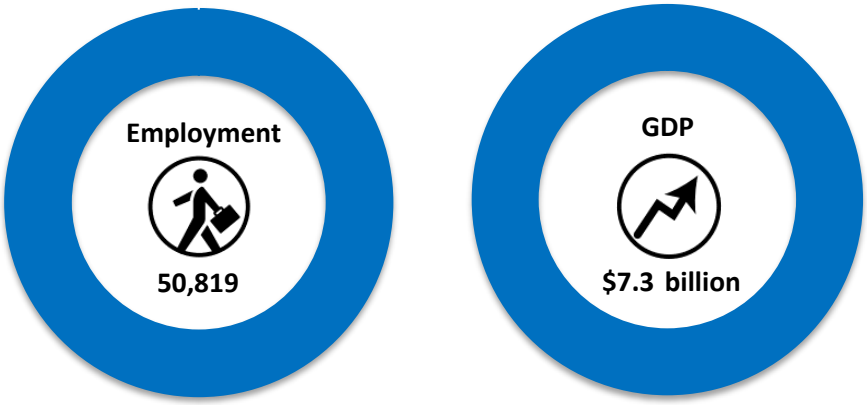
Marine construction activities occur in most regions of the U.S., but are highly concentrated in Florida, Texas, California, and Louisiana, which together in 2018 accounted for about 62.2 percent of the employment and about 58.4 percent of the gross domestic product in this sector.

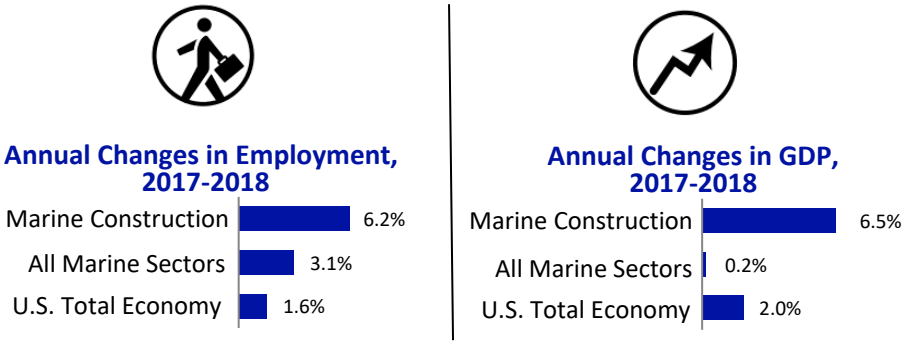
2018 U.S. Marine Economy

Marine Construction Sector

Annual Totals

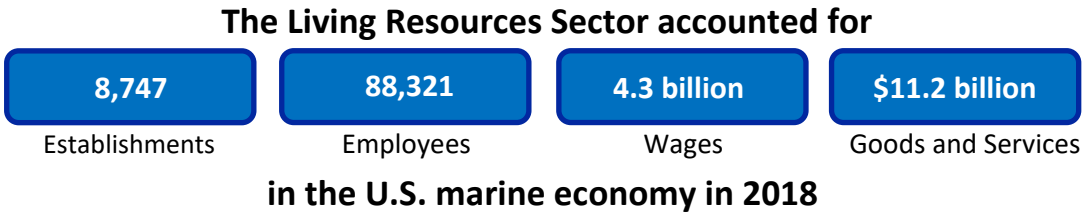
This sector accounted for 1.5% of total employment and 2.1% of total GDP in the marine economy





Economics: National Ocean Watch (ENOW)
coast.noaa.gov/digitalcoast/data/enow.html

Living Resources



This sector includes commercial fishing, aquaculture, and seafood processing and markets and accounted for only 2.6 percent of the employment and 3.2 percent of the gross domestic product of the U.S. marine economy. This sector had the second lowest average wage of all the marine sectors, yet 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 markets are the largest producer in the living resources sector, accounting for 41.5 percent of its gross domestic product. The seafood market industry also accounts for most of the employed workers (47.1 percent) in the sector.

From 2017 to 2018, employment in the sector decreased by 0.1 percent, and gross domestic product (adjusted for inflation) increased by 3.4 percent. The increase is mostly due to the addition of seafood wholesale activities to the seafood market industry, which only included seafood retail activities before 2016.

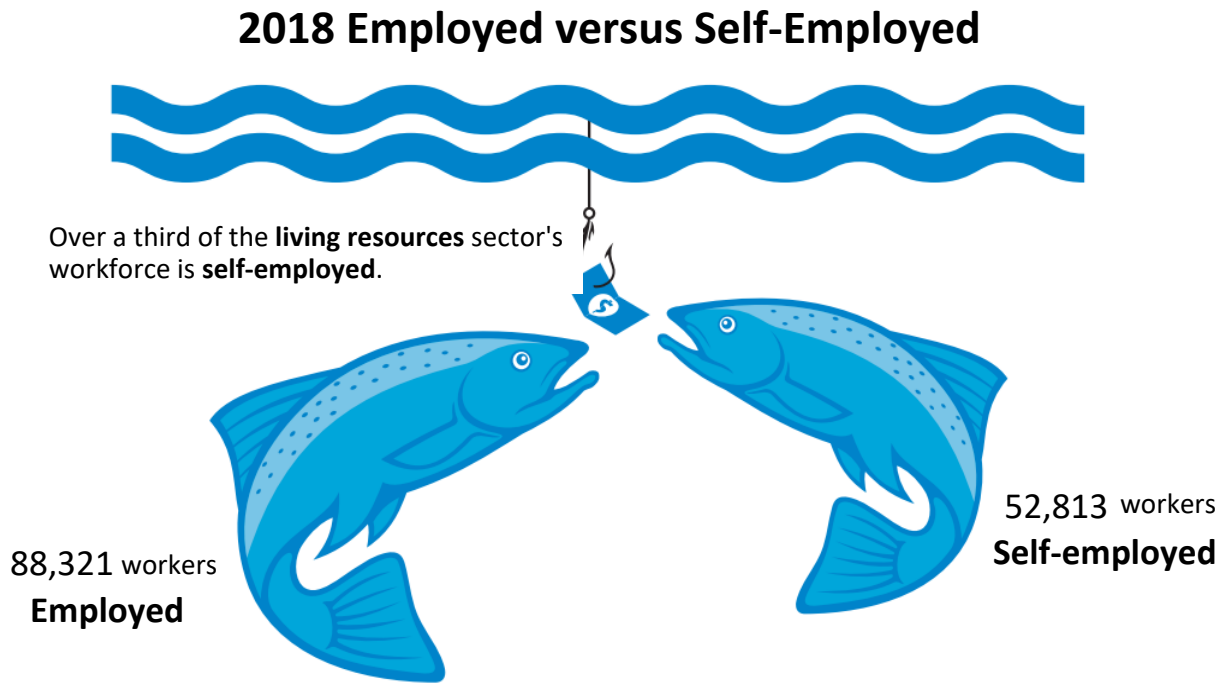
An important attribute of this sector is its reliance on the health of coastal and marine ecosystems—wetlands that serve as habitat and feeding grounds for marine fish, estuaries that are the primary habitat for oysters and other shellfish, and the marine ecosystems where much of the finfish harvesting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

Another important feature—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."[4] Lobster, crab, oysters, and finfish are important to cultural identities from Maine to Chesapeake Bay on the mid-Atlantic coast, Apalachicola Bay in Florida, and Grays Harbor in Washington. 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.

[4] 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.

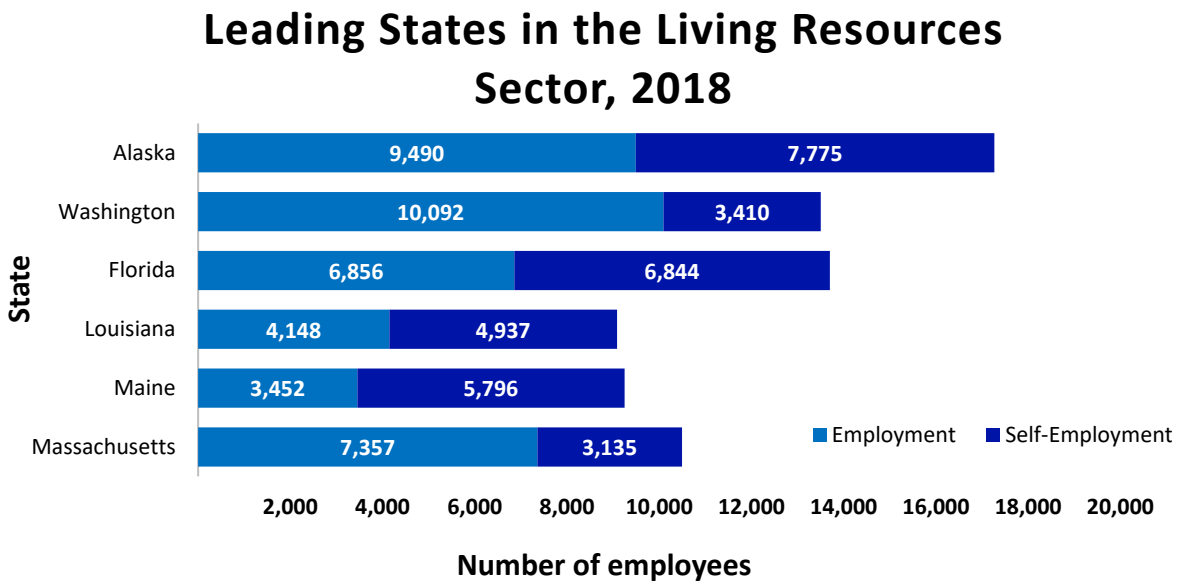
But perhaps the most distinctive attribute of this sector is the importance of self-employed workers in seafood harvesting. Even though fishing vessels require multiple crew members, these individuals are frequently not employed by the owner but work for a share of the catch. At a national level, roughly one-third of 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 dataset, ENOW for Self-Employed Workers, which is derived from the Nonemployer Statistics (NES) produced by the Bureau of the Census. In 2018, self-employed fishermen accounted for 52,813 jobs, bringing the total number of jobs in the living resources sector to more than 141,000.



In 2018, more than $3.3 billion in gross receipts were reported by the self-employed in this sector, almost as large as 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 chart below 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.



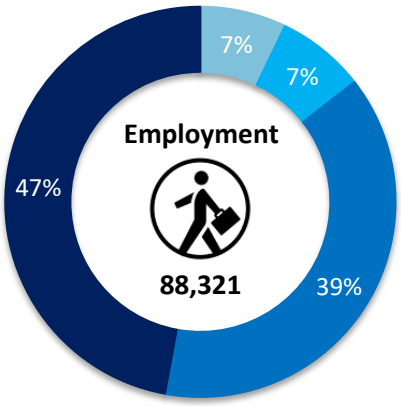
Since self-employed workers are such a large part of this sector, combining the self-employed workers with employed workers provides a more accurate and complete picture of the sector. The remainder of this report, however, looks exclusively at the component of ENOW data that focuses on businesses with employees, since self-employed workers account for only 4.0 percent of the total jobs in the marine economy, with 38.9 percent of those jobs in the living resources sector.

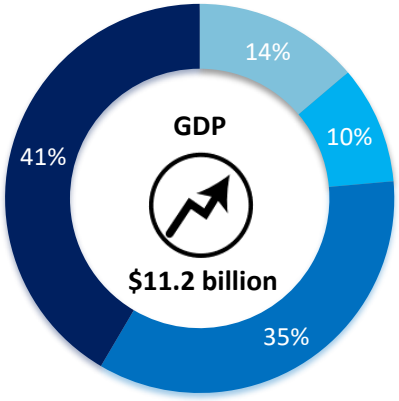
2018 U.S. Marine Economy

Living Resources Sector

Annual Totals

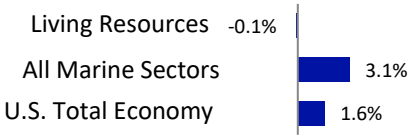
This sector accounted for 2.6% of total employment and 3.2% of total GDP in the marine economy



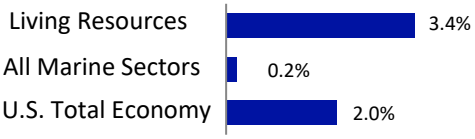


Fishing
Fish Hatcheries and Aquaculture
Seafood Processing
Seafood Markets

Annual Changes in Employment, 2017-2018



Annual Changes in GDP, 2017-2018



Economics: National Ocean Watch (ENOW)
coast.noaa.gov/digitalcoast/data/enow.html

Offshore Mineral Extraction

The Offshore Mineral Extraction Sector accounted for

4,554	117,558	$17.8 billion	$96.4 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. marine economy in 2018

This sector includes oil and gas exploration and production, as well as limestone, sand, and gravel mining. Offshore mineral extraction is capital-intensive, requiring substantial investments in research, engineering, infrastructure, and operational equipment such as oceangoing vessels. The skill sets needed also command high wages, wages that are often boosted even higher because of the hazardous working conditions. The oil and natural gas extracted are sold at relatively high prices, which help account for the large contribution this sector makes to the marine economy's gross domestic product. In 2018, offshore mineral extraction accounted for only 3.4 percent of the total employment in the marine economy but contributed 27.9 percent of its gross domestic product.

From 2017 to 2018, the offshore mineral extraction sector increased by 0.7 percent in employment and decreased by 5.7 percent in gross domestic product. Unlike the previous year, annual domestic crude prices increased about 22 percent in 2018.[5,6] The decline in gross domestic product was concentrated in the Gulf of Mexico where most of the nation's offshore oil production takes place. Future trends in this sector will likewise be driven by oil prices and production levels, which are more sensitive to global than national conditions.

Oil and gas exploration and production is the dominant industry in this sector, accounting for 94.6 percent of the employment and 98.2 percent of the gross domestic product in 2018, which is concentrated in the Gulf of Mexico region. Average sector wages per employee of $152,000 per year were almost three times the national average, and that number is consistently large due to the high wages in the oil and gas exploration and production industry.

Limestone, sand, and gravel production is generally performed in support of construction activities and is, therefore, widely distributed among the U.S. coastal states. Generally speaking, states with large economies and long coastlines, such as California, Washington, Florida, and Texas, have the greatest production of sand, gravel, and limestone. Average wages per employee in the limestone, sand, and gravel industry were about $73,000, also higher than the national average.

The national center of the oil and gas industry is Texas. Harris County, Texas, alone accounted for 65.3 percent of the employment in the nation's offshore mineral extraction sector and 95.9 percent of its gross domestic product.

[5] U.S. Energy Information Administration. "Domestic Crude Oil First Purchase Prices by Area." Accessed at *www.eia.gov/dnav/pet/pet_pri_dfp1_k_a.htm*.

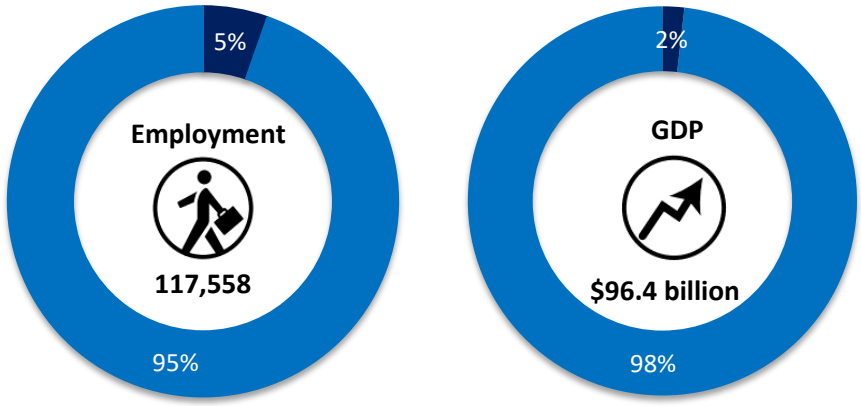
[6] As reported by the Bureau of Economic Analysis (BEA) and the U.S. Energy Information Administration (EIA): "another year of stronger oil and natural gas prices increased 2018 oil and natural gas proved reserves in the United States to another all-time record level. Crude oil and lease condensate proved reserves rose by 12%; natural gas proved reserves rose by 9%. U.S. crude oil and lease condensate production increased by 17%, and U.S. total natural gas production increased by 12%." Accessed at *https://www.eia.gov/naturalgas/crudeoilreserves/archive/2018/*.

2018 U.S. Marine Economy

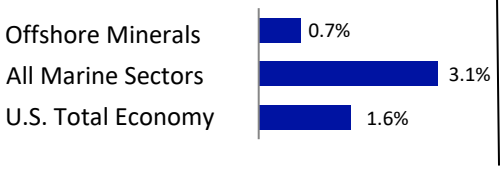
Offshore Mineral Extraction Sector

Annual Totals

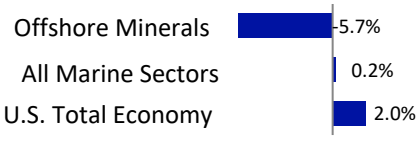
This sector accounted for 3.4 % of total employment
and 27.9 % of total GDP in the marine economy



Annual Changes in Employment, 2017-2018



Annual Changes in GDP, 2017-2018



Economics: National Ocean Watch (ENOW)
coast.noaa.gov/digitalcoast/data/enow.html

Ship and Boat Building

The Ship and Boat Building Sector accounted for

1,828	162,599	$11.4 billion	$21.7 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. marine economy in 2018

This sector includes the construction, maintenance, and repair of ships, recreational boats, commercial fishing vessels, ferries, and other marine vessels. An important attribute is the concentration of large shipyards in a few locations around the country. Boat building and repair is spread more evenly around the nation, with concentrations in areas with high levels of commercial fishing and recreational boating. Ship building, ship repair, 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' marine economies, but where they are present, they typically employ several thousand workers. This sector also includes boat repair services—generally small businesses that are common in areas that are home to fishing fleets or frequented by recreational boats.

In 2018, the ship and boat building sector accounted for 4.8 percent of the employment and 6.3 percent of the gross domestic product in the U.S. marine economy. Average wages per employee, of $70,000, were significantly higher than the national average of $54,000. The ship building, maintenance, and repair component of this sector accounted for about 80.8 percent of the employment and 80.3 percent of the gross domestic product.

The ship and boat building sector increased by 2.5 percent in employment and increased by 5.1 percent in gross domestic product from 2017 to 2018. Prior to that, this sector experienced a decline in gross domestic product that was due to ship building costs that had exceeded general inflation for decades.[7] This sector has been experiencing some ups and downs over the years.

In 2018, Virginia contributed most to employment in this sector, accounting for 29.1 percent of the national total. Washington State was the largest contributor to gross domestic products in this sector, accounting for 25.5 percent of the total. Kitsap County, Washington, was the largest county in the nation's ship and boat building sector; it alone accounted for about 11.4 percent of the employment and 21.6 percent of the gross domestic product in the nation's ship and boat building sector.

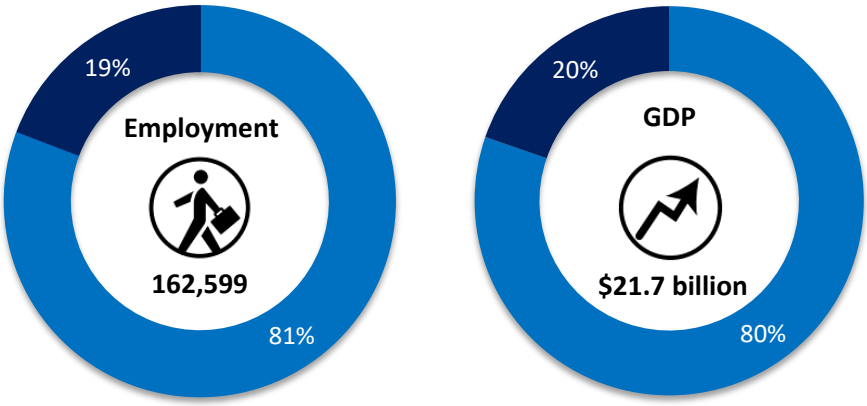
[7] U.S. Congressional Budget Office. "An Analysis of the Navy's Fiscal Year 2017 Shipbuilding Plan." Accessed at *https://www.cbo.gov/publication/52324#:~:text=CBO%20estimates%20that%20the%20cost,has%20received%20in%20recent%20decades*.

2018 U.S. Marine Economy

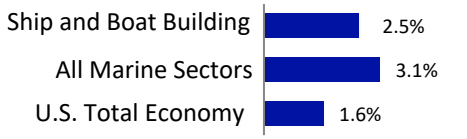
Ship and Boat Building Sector

Annual Totals

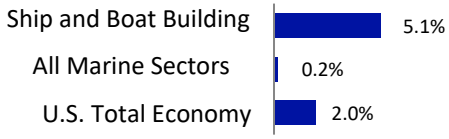
This sector accounted for 4.8% of total employment and 6.3% of total GDP in the marine economy



Annual Changes in Employment, 2017-2018



Annual Changes in GDP, 2017-2018



Economics: National Ocean Watch (ENOW)
coast.noaa.gov/digitalcoast/data/enow.html

Tourism and Recreation

The Tourism and Recreation Sector accounted for

133,201	2.5 million	$65.6 billion	$143.2 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. marine economy in 2018

This sector has more business establishments and employs more people than all the other five sectors combined. In 2018, it was also the largest sector measured in terms of gross domestic product, accounting for about 41.4 percent of the total marine economy. This sector includes a wide range of businesses that attract or support marine-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 characteristic has to do with where the businesses are located. Many depend on beautiful coastal views of beaches or access to the water, and are therefore located directly next to the water's edge. This location makes these businesses more vulnerable to coastal hazards. Since many of the activities associated with this sector, such as hotels and restaurants, are not always directly marine-dependent, only businesses located in shore-adjacent zip codes are considered marine-dependent.

Another important attribute—the seasonal nature of these businesses, and the large number of part-time employees. This, in part, accounts for the relatively low wages for employees in this sector. Workers in this sector are usually relatively young, with a large number of students for whom seasonal employment is ideally suited.

Many of the coastal and marine amenities that attract visitors are free, generating no direct employment, wages, or gross domestic product, yet these "nonmarket" features are usually key drivers for all of the market-based activity. Another fact of note—the market-based aspects of this sector can be greatly affected by ecosystem health, water quality, and the associated aesthetics.

The majority of the jobs are in hotels and restaurants in nearshore areas where many of the tourist attractions are located. These two industries alone account for 93.8 percent of the employment and 92.4 percent of the gross domestic product in this sector.

Although the other industries are much smaller (aquariums, whale watching, and recreational fishing charters, for instance), the businesses arguably drive much of the tourist traffic. Vacationers stay at hotels and eat in restaurants, but the real attraction is the marine-related recreational activities and the nonmarket activities such as surfing and beach visitation.

From 2017 to 2018, tourism and recreation gained 55,000 jobs, accounting for most of the employment growth in the marine economy. Gross domestic product in the tourism and recreation sector declined during the 2008 economic recession but recovered rapidly and has grown ever since. For example, the boat dealer industry declined steadily between 2005 and 2013, corresponding to declines in the boat building industry, but this industry began to rebound in 2014, with continued growth in gross domestic product from 2017 to 2018 of 7.0 percent. Also, like the previous year, the amusement and recreation services industry grew the fastest from 2017 to 2018—by 11.4 percent in employment and 17.5 percent in gross domestic product.

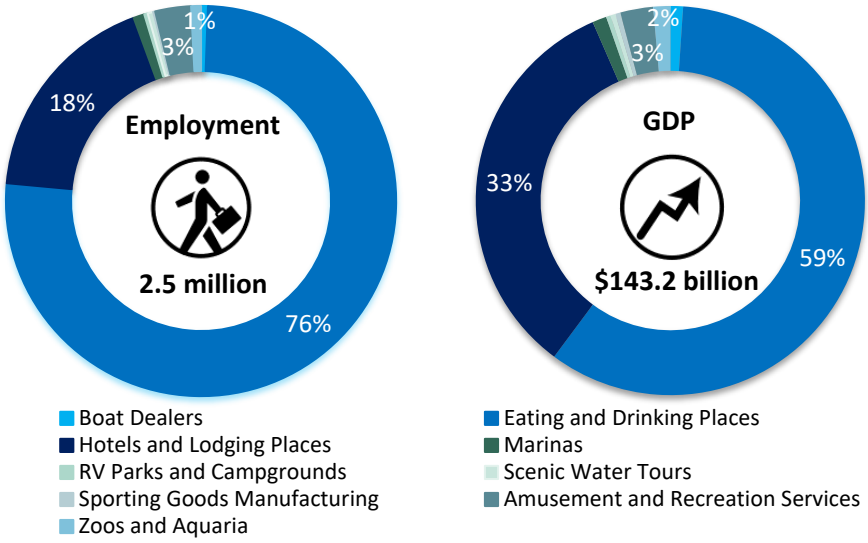
California and Florida are the two major contributors to this sector, together accounting for more than one-third of its total employment and gross domestic product in 2018.

2018 U.S. Marine Economy

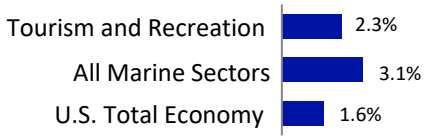
Tourism and Recreation Sector

Annual Totals

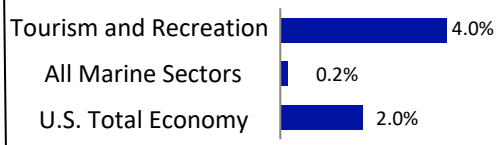
This sector accounted for 72.1% of total employment and 41.4% of total GDP in the marine economy



Annual Changes in Employment, 2017-2018



Annual Changes in GDP, 2017-2018



Economics: National Ocean Watch (ENOW)
coast.noaa.gov/digitalcoast/data/enow.html

Marine Transportation

The Marine Transportation Sector accounted for

10,559	535,742	$37.1 billion	$66.1 billion
Establishments	Employees	Wages	Goods and Services

in the U.S. marine economy in 2018

This sector includes businesses engaged in deep-sea freight, marine passenger services, marine transportation services, warehousing, and the manufacture of navigation equipment. It accounted for 15.7 percent of the employment and 19.1 percent of the gross domestic product in the U.S. marine economy. While the sector represents a smaller percentage of the marine economy than tourism and recreation or offshore mineral extraction, it is an integral component of the marine economy, paying one of the highest average wages per employee, $69,000, in 2018.

Warehousing remains the largest component of the marine transportation sector in terms of employment, accounting for 55.1 percent of 2018 total employment for the sector. 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, warehousing, and moving cargo, the figures 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. (That said, the $1.7 trillion of vessel cargo imported and exported in 2018 is indicative of the large indirect effects of our coastal ports.[8]) Our nation's ocean and Great Lakes waters remain a leading mode to transport foreign goods for trade; ships accounted for 21.0 percent of exports and 23.6 percent of imports as measured by weight, and 9.3 and 8.7 percent, respectively, as measured by value in 2018.[9] 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 on imported goods.

In the marine transportation sector, about 21.1 percent of employment and 25.3 percent of real gross domestic product are supported by California. The rest is distributed across the nation, concentrated around major seaports.

[8] U.S. Census Bureau. "FT920: U.S. Merchandise Trade: Selected Highlights, December 2018." Accessed at *https://www.census.gov/foreign-trade/Press-Release/2018pr/12/ft920/index.html.*

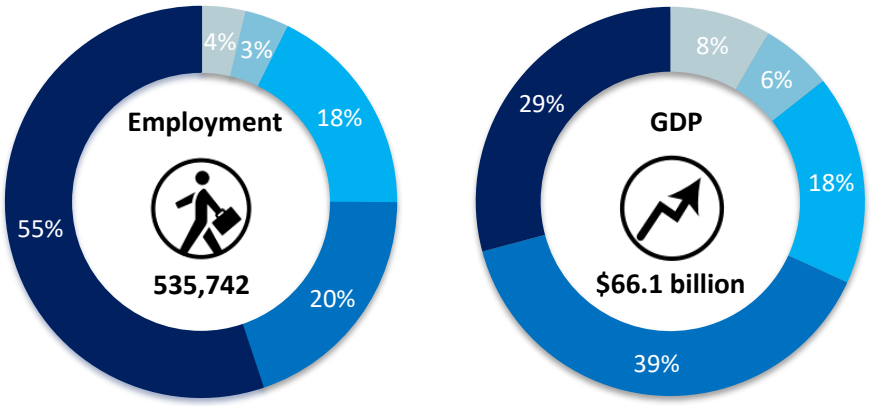
[9] U.S. Department of Transportation's Bureau of Transportation Statistics. "Moving Goods in the United States." Accessed at *https://data.bts.gov/stories/s/Moving-Goods-in-the-United-States/bcyt-rqmu.*

2018 U.S. Marine Economy

Marine Transportation Sector

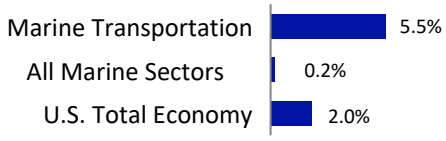
Annual Totals

This sector accounted for 15.7% of total employment and 19.1% of total GDP in the marine economy



Annual Changes in Employment, 2017-2018

Annual Changes in GDP, 2017-2018



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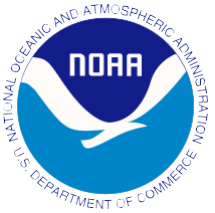

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