

FREQUENT QUESTIONS



NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

Economics: National Ocean Watch (ENOW) Data

November 2012

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ENOW Data Basics

What is the definition of Economics: National Ocean Watch (ENOW)?

Economics: National Ocean Watch (ENOW) describes six economic sectors that depend on the oceans and Great Lakes. ENOW's annual time-series data are produced by the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center for 448 coastal counties, 30 coastal states, 8 regions, and the nation from 2005 to 2010 and onward using data from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

What does ENOW measure?

ENOW provides data for four economic indicators:

1. business establishments (ENOW counts individual places of business; a single firm may have multiple places of business)
2. employment (the number of people employed by business establishments, including part-time and seasonal workers; this figure does not include the number of self-employed workers)
3. annual wages (wages paid to employees)
4. Gross Domestic Product, or GDP (the value of goods and services that are produced; in ENOW, this is based on the state estimates of GDP that are produced by the Bureau of Economic Analysis, called Gross State Product, or GSP)

What are the definitions of "market" and "nonmarket" data?

The goal of economics is to get the most value as we make choices about how to use the limited resources that are at our disposal. A lot of the things that are valuable to people are routinely bought and sold. In this case, we have good records of what people actually paid for goods and services, the amount of money paid to workers, etc. Values for these goods and services are called **market values**. However, many of the things that are valuable to people are not bought or sold. The value of things like clean air and water, a beautiful view of a healthy coastal wetland, and a day of recreation at a public beach is just as real and is sometimes much greater than market values. However, because there are no market transactions associated with their enjoyment, estimating **nonmarket values** can be difficult and expensive. Despite this, basing decisions on only the easily measurable values can lead to decisions that make individuals and society worse off. ENOW data contain only market data; they do not contain nonmarket economic activity.

What economic activities are dependent on the oceans and Great Lakes?

The oceans and Great Lakes provide direct or indirect inputs to a wide range of economic activity. ENOW estimates are based in part on the definition of the industries themselves (for example, Deep Sea Freight Transportation) and in part on the geographic location of individual business establishments (for example, a hotel in a coastal town). Economic activity for a business establishment is included in ENOW when the establishment either is

- (1) associated with an industry whose definition explicitly ties the activity to the ocean, or is
- (2) located in an industry which is partially related to the ocean and is located in a shore-adjacent zip code.

What industry aggregates compose the six sectors in the Ocean Economy?

The ocean economy comprises the following six sectors:

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

See the methods section for a list of the specific industries included in each of these sectors (“What industries are included in the sectors and what are their NAICS codes?”).

Geographic Coverage Details

What is the geographic “scope” of the ENOW sectors?

The basic footprint for ENOW data is the list of “Coastal Zone Management Act (CZMA) State Coastal Zone-Based Coastal Counties” developed by NOAA’s National Ocean Services, Special Projects office. A county is considered a coastal zone county if it is included within or intersects a Coastal Zone Management Act (CZMA) state coastal zone boundary. The method by which each state defines its coastal zone boundary varies; for a complete description of the methods used by each state with a Coastal Zone Management Program, see the coastal zone definition for each state at

<http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf>.

Because this area is the smallest geography that contains nearly all ocean economic activity, it was chosen as the primary area of data coverage to avoid the creation of a new specialized geographic area. However, to avoid missing a significant volume of ocean-dependent economic activity that takes place in six non-CZMA counties in New Jersey (Camden, Essex, Gloucester, Passaic, Somerset, and Union), these counties are also included in ENOW.

For some industrial classes, only those establishments located in shore-adjacent zip codes are included in the sector totals. Since hotels and restaurants, for example, may or may not be dependent on the ocean or Great Lakes, only those establishments that are nearest to the coast are included in the ocean economy. Other industries, like “deep sea freight,” are defined in terms that make it possible to include the entire industry in the ocean economy. The scope for these industries is “all.”

See the methods section for more information on the geographic scope of each industrial class included in the ENOW data (“What industries are included in the sectors and what are their NAICS codes?”).

Data Details

How frequently are ENOW data updated?

ENOW data are updated annually.

Why are some values “-999” or “suppressed”?

The value “-999,” or term “suppressed,” indicates that a sector may have relevant data but that these data are not able to be provided publically. To protect the confidentiality of businesses, economic statistics are generally not published when they can be used to learn about an individual establishment. The Quarterly Census of Employment and Wages and the Economics: National Ocean Watch data provide three levels of protection:

- **Primary suppression.** When a single establishment or small number of establishments accounts for a large share of any computed value, this value is suppressed. The “p-percent” rule is used to determine the need for suppressions; this particular method is effective when one or two business establishments account for a very large part of any value.
- **Secondary suppression.** When a suppressed value is reflected in a total that is being reported, a second value is also suppressed. Otherwise, the suppressed value could be computed using subtraction.
- **Complementary suppression.** Additional suppressions are sometimes required to prevent the use of other reported values to compute suppressed values.

For Example:

Imagine a county in which one commercial fishing operation accounts for 50 percent of the total employment in the Living Resources sector and another accounts for 45 percent of that total. Since each of these firms has access to its own business records, a published total could be used by either firm to learn about its competitor. The total for this sector would be suppressed (primary suppression).

If no other sector totals were suppressed, it would be possible to subtract the other sector totals from the Ocean Economy total for this county to determine the value of the Living Resources sector, again enabling either large business to learn about its competitor. To prevent this, another sector is also suppressed (secondary suppression).

If data for the Living Resources sector could be reported for all other counties in the state, it might be possible to use a state total to compute the suppressed value for this county’s Living Resources sector. In this case, it would be necessary to suppress the data for another county (complementary suppression).

If ENOW shows values of zero for my county, does that mean that no activity of that type takes place in my county?

Not necessarily. ENOW is based on employment statistics and therefore does not include the activity of the self-employed. When ENOW reports zeros for a county, this indicates that (a) no

economic activity of that type occurs in the county or (b) all economic activity of that type is associated with the self-employed. Undisclosed data are labeled as such; they do not appear in the ENOW data with a value of zero.

What is ENOW’s relationship to the NOEP data?

ENOW data are generated using methods that build on an extensive body of research dating to the late 1970s. The current composition of the six ocean- and Great Lakes-dependent sectors is largely the result of NOAA-funded work conducted by the National Ocean Economics Program (www.oceaneconomics.org). ENOW has, however, revised the definitions of two of the six NOEP sectors. One revision corrects the accidental exclusion of natural gas liquid extraction from NOEP Offshore Mineral Resources data. The other presents a more comprehensive assessment of the marine transportation sector by adding data for pipeline transportation of crude oil, natural gas, and refined petroleum products.

Does the Living Resources sector include recreational fisheries?

No, recreational fisheries are included in the tourism and recreation sector.

Is the cargo that is brought in on ships included in the Marine Transportation sector?

No, the Marine Transportation sector includes the value of housing the cargo, moving it from ships to port facilities, and external transport, but not the value of the cargo itself.

Data Relevance

Why is it important to know the size of the ocean and Great Lakes economy?

The ocean and Great Lakes economy is large, accounting for about twice the level of employment as agriculture.¹ However, the size and relative importance of the ocean and Great Lakes economy varies greatly across the country. ENOW data make it possible to study the degree to which local, state, regional, and national economies depend on the resources of the oceans and Great Lakes. They help to show what’s at stake in decisions about the management, protection, and use of these resources.

Why is it important to understand the sectors involved in the ENOW-defined ocean economy?

While all ENOW sectors depend on the ocean and Great Lakes in some way, these dependencies vary greatly. For example, ecological health contributes to the value of some economic activities, like fishing and tourism, but not others, like oil production or marine transportation. Some activities can negatively impact the ecological health that other activities depend on. Understanding the type of economic activities that depend on the oceans and Great Lakes can help to guide planning, management, and policy decisions.

¹ The National Ocean Economics Program (NOEP) showed 2.3 million persons employed in the ocean and Great Lakes economy in 2004. The Quarterly Census of Employment and Wages, from which the NOEP data are derived, showed 1.1 million persons employed in Agriculture, Forestry and Fisheries (NAICS class 11) during the same year.

Data Source

What is the data source, and how were the data collected?

ENOW totals for business establishments, employment, and wages are based on the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) data (also known as the ES-202 data). ENOW totals for gross domestic product (GDP) are based on the Bureau of Economic Analysis' GDP-by- state statistics. QCEW and GDP data are provided for industrial groups

What is contained in the Quarterly Census of Employment and Wages (QCEW)?

The QCEW program produces a comprehensive tabulation of employment and wage information for workers covered by state unemployment insurance laws and for federal workers covered by the Unemployment Compensation for Federal Employees program, covering approximately 90% of U.S. businesses. Publicly available files include data on the number of establishments, monthly employment, and quarterly wages by industry, county, and ownership sector, for the entire United States. These data are aggregated to annual levels, to higher industry levels (industry groups, sectors, and supersectors), and to higher geographic levels (national, state, and Metropolitan Statistical Area (MSA)). An FAQ document about the QCEW data can be found at www.bls.gov/cew/cewfaq.htm.

What are GDP data, and where can I get more information on GDP?

Gross domestic product (GDP) is one of the most comprehensive and closely watched economic statistics. It measures the size and composition of the U.S. economy based on the market value of all final goods and services produced during a year by resources that are located in the United States. Annual estimates of GDP for states and the nation are produced by the U.S. Department of Commerce, Bureau of Economic Analysis. Since 1997, industrial sectors used in the GDP have been defined by the North American Industry Classification System; data are published in both real (adjusted for inflation) and current (not adjusted) dollars. For more information, see www.bea.gov/regional/gsp/help/.

What is the difference between the “ocean” and “total” economy?

The ocean economy is that subset of the total economy that depends on the oceans and Great Lakes. The QCEW and GDP data from which ENOW data are derived are classified by type of industry using the North American Industry Classification System (NAICS). Each ENOW sector represents a composite of multiple NAICS industry classes that depend on the oceans and Great Lakes.

What is the North American Industry Classification System (NAIS)?

The North American Industry Classification System (NAICS) is the standard system used by business and government to classify business establishments according to type of economic activity. It is standardized across Canada, Mexico, and the United States. First adopted in 1997, NAICS replaced the Standard Industrial Classification (SIC) and was designed to provide a high degree of comparability with business statistics produced by Canada and Mexico. Information on the current (2007) version of NAICS is available from the Census Bureau at www.census.gov/eos/www/naics/index.html.

What industries are included in the sectors, and what are their NAICS codes?

Ocean and Great Lakes Economy Sectors and Industries by NAICS Codes			
Sector	Industry	NAICS Code	NAICS Industry (1997 NAICS)
Living Resources	Fish Hatcheries and Aquaculture	112511	Finfish Farming and Fish Hatcheries
		112512	Shellfish Farming
	Fishing	114111	Finfish Fishing
		114112	Shellfish Fishing
	Seafood Processing	311711	Seafood Canning
		311712	Fresh and Frozen Seafood Processing
	Seafood Markets	445220	Fish and Seafood Markets
Marine Construction	Marine Related Construction	237990	Other Heavy and Civil Engineering Construction
Marine Transportation	Deep Sea Freight	483111	Deep Sea Freight Transportation
		483113	Coastal and Great Lakes Freight Transportation
	Marine Passenger Transportation	483112	Deep Sea Passenger Transportation
		483114	Coastal and Great Lakes Passenger Transportation
	Marine Transportation Services	488310	Port and Harbor Operations
		488320	Marine Cargo Handling
		488330	Navigational Services to Shipping
		488390	Other Support Activities for Water Transportation
	Search and Navigation Equipment	334511	Search, Detection, Navigation, Guidance, Aeronautical and Nautical System and Instrument Manufacturing
	Warehousing	4931	Warehousing and Storage

Ocean and Great Lakes Economy Sectors and Industries by NAICS Codes			
Sector	Industry	NAICS Code	NAICS Industry (1997 NAICS)
Offshore Mineral Resources	Limestone, Sand and Gravel	212321	Construction Sand and Gravel Mining
		212322	Industrial Sand Mining
	Oil and Gas Exploration and Production	211111	Crude Petroleum and Natural Gas Extraction
		211112	Natural Gas Liquid Extraction
		213111	Drilling Oil and Gas Wells
		213112	Support Activities for Oil and Gas Operations
		541360	Geophysical Exploration and Mapping Services
Ship and Boat Building	Boat Building and Repair	336612	Boat Building and Repair
	Ship Building and Repair	336611	Ship Building and Repair
Tourism and Recreation	Boat Dealers	441222	Boat Dealers
	Eating and Drinking Places	722110	Full Service Restaurants
		722211	Limited Service Eating Places
		722212	Cafeterias
		722213	Snack and Nonalcoholic Beverage Bars
	Hotels and Lodging	721110	Hotels (except Casino Hotels) and Motels
		721191	Bed and Breakfast Inns
	Marinas	713930	Marinas
	Recreational Vehicle Parks and Campsites	721211	RV Parks and Recreational Camps
	Scenic Water Tours	487210	Scenic and Sightseeing Transportation, Water
	Sporting Goods	339920	Sporting and Athletic Goods Manufacturing
	Amusement and Recreation Services	487990	Scenic and Sightseeing Transportation, Other
		611620	Sports and Recreation Instruction
		532292	Recreation Goods Rental
713990		Amusement and Recreation Services Not Elsewhere Classified	
Zoos, Aquaria	712130	Zoo and Botanical Gardens	
	712190	Nature Parks and Other Similar Institutions	