



# National Shoreline Management Study

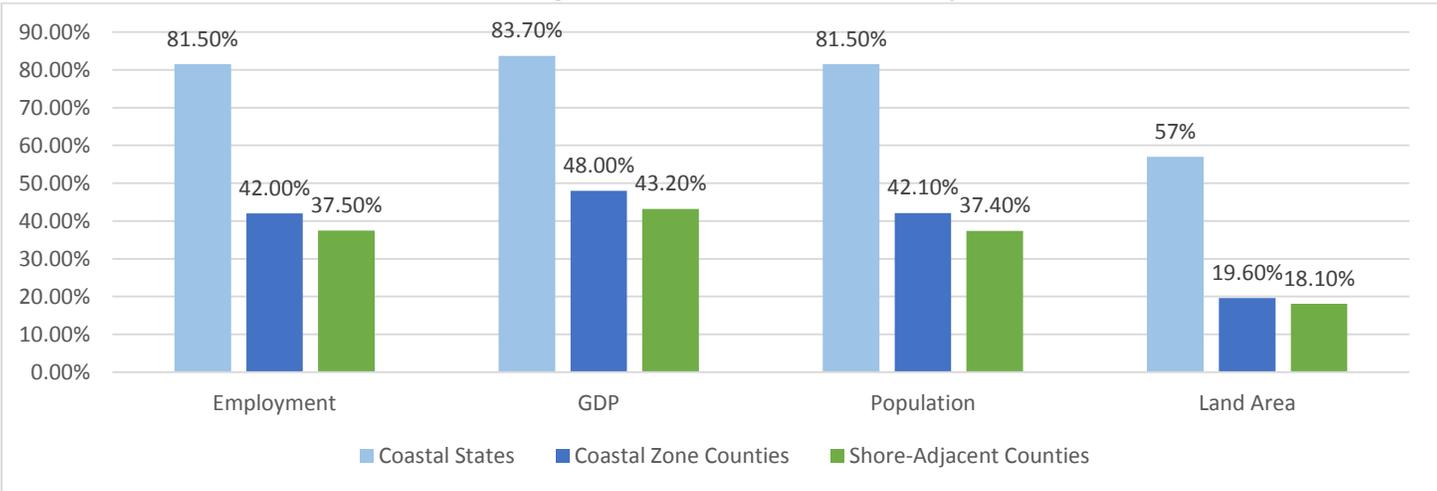
## Eroding U.S. Shorelines - A Call for Resilience Planning

The congressionally-authorized National Shoreline Management Study (NSMS) is the first undertaking in nearly a half-century to document the physical, economic, environmental, and social impacts of shoreline change across each region of the U.S. Under the leadership of the *Institute for Water Resources* of the U.S. Army Corps of Engineers, NSMS provides coastal scientists, government policymakers, and stakeholders with information about the coastal regions most in need of resilience planning.

**While Congress has funded NSMS since 2001, appropriations in recent years have declined.** This decrease in support has come just as there is a public awakening to the dangers of increased coastal flooding. The congressionally-mandated Comprehensive Study following SuperStorm Sandy shows the critical role that Federal leadership and funding plays to help States, local government, businesses and other key stakeholders engage in planning that addresses potential future risks and allows for a fundamental shift away from costly and near-sighted disaster-driven responses.

Continual erosion of the U.S. shoreline presents a considerable financial and safety risk to coastal infrastructure, economies, and populations. Individual regions face unique challenges and require solutions reflective of that. The following graphs and charts underscore the importance of the coastal economy to the national economy.

**Coastal Region's Share of U.S. Economy 2014**



**Growth Rates in the Coastal Economy 2010-2014**

Region	Employment (millions)			GDP (\$Trillion, 2009)			Population (millions)		
	2010	2014	Annual Change	2010	2014	Annual Change	2010	2014	Annual Change
<b>United States</b>	127.8	136.6	1.72%	\$14.6	\$15.8	1.9%	309.3	318.9	0.77%
<b>Coastal States</b>	104.1	111.3	1.73%	\$12.3	\$13.2	2.0%	252.1	259.8	0.76%
<b>Coastal Zone Counties</b>	53.6	57.3	1.72%	\$7.0	\$7.6	1.9%	129.9	134.2	0.84%
<b>Shoreline Adjacent Counties</b>	47.8	51.2	1.78%	\$6.3	\$6.8	2.0%	115.5	119.3	0.82%



## Mid-Atlantic

The Mid-Atlantic coastal region is sediment-rich, but highly susceptible to coastal storms and sea level rise. Given the population density and potential social and economic effects of changes in ocean circulation and sea level, the Mid-Atlantic coast of the U.S. may be one of the most vulnerable regions in the world to rising sea levels.

Superstorm Sandy demonstrated that beach renourishment projects were effective at reducing storm damage. Similarly, it emphasized the potential efficacy of regionally-defined resilience strategies that take advantage of area-specific geographic and natural elements.

Government agencies should continue to seek ways to move from site-specific reactive management to more comprehensive regionally-based shore management to increase resilience and long-term sustainability.

## Delaware's Ocean Economy

- Generated \$935.3 million or 1.5% of the state's GDP.
- Provided \$511.2 million in wages and salaries.
- Provided 23,194 jobs.
- 18,906 jobs (81.5%) of the state's ocean economy employment were in coastal tourism and recreation.
- Tourism and recreation contributed \$619.3 million (66.2%) of the state's ocean GDP.

## Delaware's Ocean Resources

- In 2014, commercial fisheries landings were 3.6 million pounds, valued at \$6.6 million.
- Over the last decade, the blue crab harvest peaked in 2012, and has fallen by 55% over 2.3 million pounds, since then.

## Delaware's Coastal Population

- State population – 935,614, 12.9% growth
- Largest county – New Castle: 552,778
- Highest density – New Castle: 1,297.6 per sq. mile
- County population and 10 year growth rates:

Kent	171,987	23.9%
New Castle	552,778	6.7%
Sussex	210,849	22.7%

## Delaware's Coastal Economy

County	Employment	Wages (\$billion)	GDP (\$billion)
All Counties	423,598	\$22.5	\$62.8
Kent	54,319	\$2.6	\$7.4
New Castle	278,216	\$16.7	\$47.9
Sussex	71,541	\$2.6	\$7.5

State and County Economic Change, 2007-2014			
County	Employment	Wages	GDP
All Counties	0.04%	-1.54%	-2.11%
Kent	1.84%	-0.98%	-0.28%
New Castle	-1.77%	-3.10%	-2.42%
Sussex	1.10%	-2.58%	-1.90%