

Restoration goals: One million sacks of oysters by 2025

The Mississippi Gulf Coast Restoration Plan (2016) by the Mississippi Department of Environmental Quality (MDEQ) and the National Fish and Wildlife Foundation (NFWF) is the guiding policy document for oyster restoration in Mississippi¹. The goal for the Mississippi Sound (which includes the Back Bay of Biloxi), according to the 2016 Plan, is to **increase oyster reef productivity** and **produce one million sacks of oysters** (300 oysters per sack) annually by 2025.



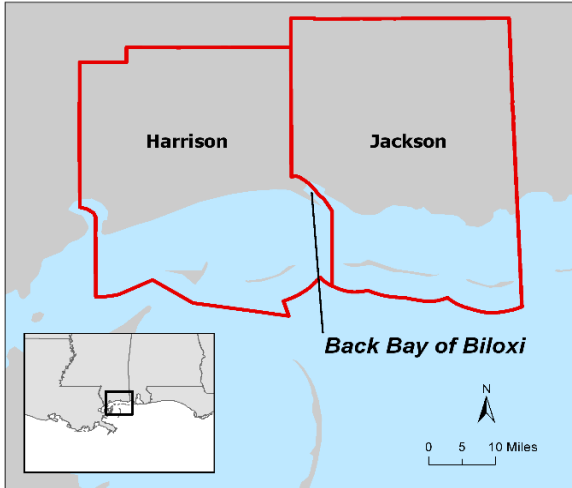
30% (300,000 sacks per year) will be produced by private leases.



70% (700,000 sacks per year) will be produced by public reefs.



12,000 acres of public oyster area are needed to meet the public reef goal at the aggressive harvest rate of 20%.



Harvesting practices

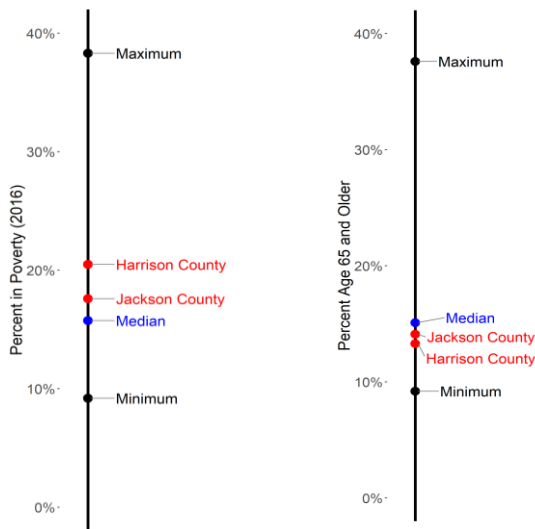
The 2016 Plan also includes recommendations made by the Governor's Oyster Council in regards to harvesting practices¹:

- **Implement new management activities for oyster harvests**, such as management practices and metrics to assess reef health, a no-net change based model to establish quotas that allow for sustainable fisheries, and/or enforcement of harvesting Best Management Practices.
- **Establish a shell recovery program** and a program that estimates the annual number of oysters available for harvest.

Note: In the following sections, the line graphs compare the counties surrounding Back Bay of Biloxi (as shown in the map above) with all of the U.S. counties that border the Gulf of Mexico. In each graph, the Back Bay of Biloxi counties are shown in red, the minimum and maximum of all of the Gulf coastal counties in black, and the median of all Gulf coastal counties in blue.

Demographics

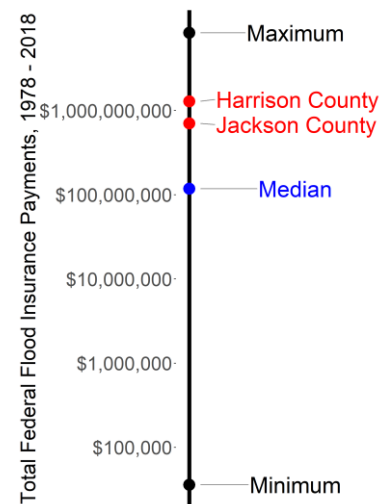
Harrison and Jackson counties have a higher poverty rate² and a slightly lower proportion of older people than most Gulf coastal counties³.



Harrison County has 17.9% food insecurity and Jackson County has 15.3% food insecurity, which are higher than the median Gulf coastal county (14.3%)⁹.

Flood vulnerability

Harrison and Jackson counties have received more money from federal flood insurance payments than most Gulf coastal counties⁴.

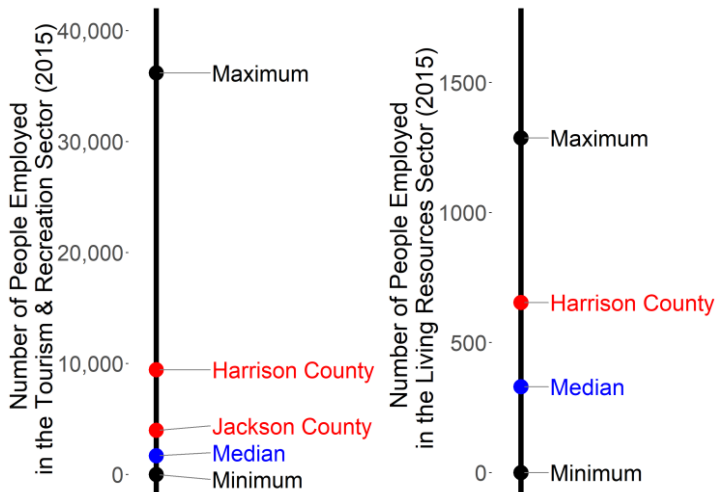


As of 2010, more than 69,000 people were estimated to live within one mile of the shoreline in Back Bay of Biloxi counties⁸. That's more than 21% of their total population.

Economy

Harrison and Jackson counties employ **more people in the recreation sector** (includes charter and recreational fishing, boat tours, marinas, campsites, hotels and restaurants), and

Harrison County employs **more people in the living resources sector** (includes commercial fishing, aquaculture, seafood processing and seafood markets), than most Gulf coastal counties⁵.



The recreation sector makes up 3.5% and 1.8% of GDP in Harrison and Jackson counties, respectively⁶.

The living resources sector makes up 0.42% of GDP in Harrison County.

Note: Economic data on the living resources sector for Jackson County are not available due to confidentiality issues.

Recreation

Saltwater fishing is a recreational activity related to healthy estuaries that is popular among residents and visitors of Mississippi. According to a 2011 survey⁷:

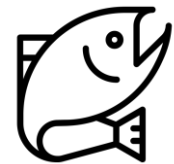
120,000 people participated in saltwater fishing in Mississippi.



Saltwater anglers spent an average of **\$369 per person** on fishing trips and equipment.



Saltwater anglers spent about **2.3 million days** fishing, or about **19 days per angler**.



Red drum were particularly popular among saltwater anglers.



Economic impacts of oyster reefs in Mississippi

Oyster reefs in the Mississippi Sound have significant economic value¹. The recent decline in oyster harvests can be attributed to:

- Intensive fishing efforts
- Dredging
- Urban and industrial development
- Altered hydrological regime

Year	Oyster harvest (lb)	Commercial value
2000	3.5 million	\$6 million
2013	500,000	\$1.5 million

References

- 1: Mississippi Department of Environmental Quality (MDEQ), National Fish and Wildlife Foundation(NFWF). *Mississippi Gulf Coast Restoration Plan*. 2016. https://www.mdeq.ms.gov/wp-content/uploads/2017/09/2016-Addendum-FINAL-10_31_2016.pdf
- 2: United States Census Bureau. "All Ages in Poverty." *Small Area Income and Poverty Estimates*. 2016. <https://www.census.gov/data-tools/demo/saipre>.
- 3: United States Census Bureau. "DP05: ACS Demographic and Housing Estimates." *2012-2016 American Community Survey 5-year Estimates*. 2016. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_DP05&src=pt.
- 4: Federal Emergency Management Agency. 2018. Loss statistics from Jan 1, 1978 through May 31, 2018. <https://bsa.nfipstat.fema.gov/reports/1040.htm>.
- 5: National Oceanic and Atmospheric Administration. 2015. "Ocean Economy (employment data) and Ocean Economy (self-employed workers)." *Quick Report Tool for Socioeconomic Data*. <https://coast.noaa.gov/quickreport>.
- 6: National Oceanic and Atmospheric Administration. 2015. "GDP: Total Ocean Economy." *ENOW Explorer*. <https://coast.noaa.gov/enowexplorer>.
- 7: United States Fish & Wildlife Service. *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Mississippi*. 2011.
- 8: United States Census Bureau. 2010. "P1: Total Population." *2010 Census*. <https://factfinder.census.gov>; United States Environmental Protection Agency / Enviroatlas. 2013. "Dasymetric Population in the Conterminous United States." <https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/Supplemental/DasymetricAllocationofPopulation.pdf>; National Geospatial-Intelligence Agency. "World Vector Shoreline." <https://shoreline.noaa.gov/data/datasheets/wvs.html>.
- 9: Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato, & E. Engelhard. 2018. *Mind the Meal Gap 2018: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2016*. Feeding America. <http://www.feedingamerica.org/research/map-the-meal-gap-by-county.html>.
- 10: "Oyster" icon by Buckley Powell from the Noun Project.
- 11: "Fishing" icon by Nikita Kozin from the Noun Project.
- 12: "Fishing" icon by Janira Keana from the Noun Project.
- 13: "Fish" icon by Christine Komatsu from the Noun Project.
- 14: "Net" by Stanislav Cherenkov from the Noun Project.