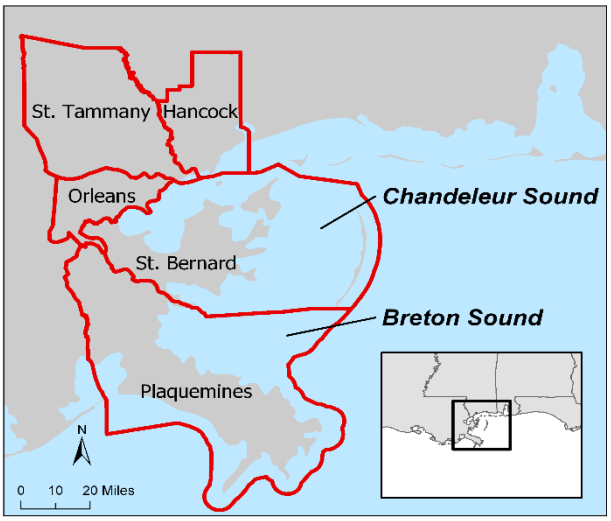
# Chandeleur-Breton Sounds, Louisiana GEMS




## Oyster restoration goals

The Strategic Framework for Oyster Restoration Activities by the Deepwater Horizon Oil Spill Natural Resource Damage Assessment Trustees sets goals for oyster restoration in Louisiana[1].

The goals from this framework are:

- Restore **oyster abundance and spawning stock** to support a regional oyster larvae pool sufficient for healthy recruitment levels to oyster reefs.
- Restore **resilience to oyster populations** that are supported by productive larval source reefs and sufficient substrate in larval sinks.
- Restore a diversity of **oyster reef habitats**.

## Restoration strategies

Appropriate restoration strategies for the area, identified by the Louisiana Department of Wildlife and Fisheries (LDWF), include[2]:

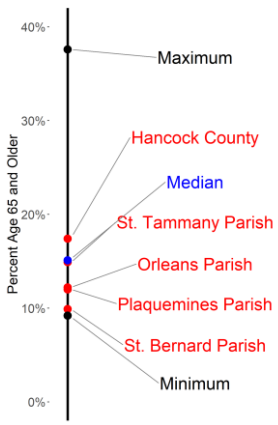
**Cultch planting:** A cultch plant on the public oyster seed grounds in St. Bernard Parish cost $1.4 million construct in 2011 and produced approximately $14 million worth of oysters during a 5-day harvest season in 2015.

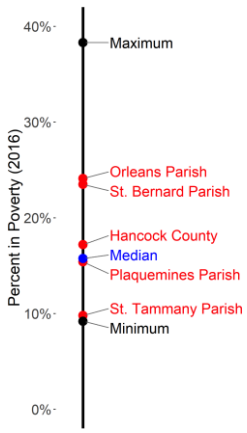
**Reef construction from recycled shells:** Since 2014, the Oyster Shell Recycling Program has collected over 3,000 tons of oyster shells from restaurants to construct oyster reefs. The first reef was completed in 2016 in St. Bernard Parish's Biloxi Marsh.

*Note:* In the following sections, the line graphs compare the counties surrounding Chandeleur-Breton Sounds (as shown in the map above) with all of the U.S. counties that border the Gulf of Mexico. In each graph, the Chandeleur-Breton Sound 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

In general, Chandeleur-Breton Sound parishes have **a lower proportion of older people**[5] and a **higher rate of poverty**[6] than most Gulf coastal counties.

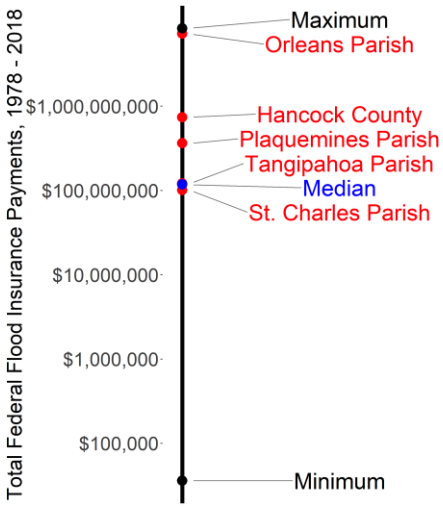



Hancock County has a food insecurity rate of 14.4% and Orleans Parish has a food insecurity rate of 22.8%, which are higher than the median Gulf coastal county (14.3%)[7]. Plaquemines, St. Bernard and Tammany parishes have food insecurity rates between 9.3% and 13.9%.

## Flood vulnerability

In general, Chandeleur-Breton Sound parishes have received **more money from federal flood insurance payments** than most Gulf coastal counties[8].




As of 2010, more than 52,000 people were estimated to live within one mile of the shoreline in Chandeleur-Breton Sound parishes[9]. That's more than 7% of their total population.

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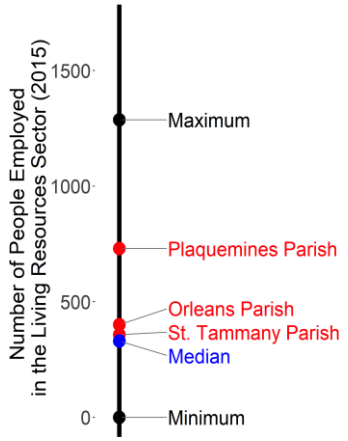
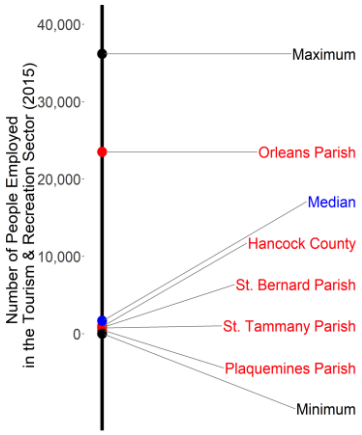
## Economy

Orleans, Plaquemines, and St. Tammany parishes **employ more people in the living resources sector** (includes commercial fishing, aquaculture, seafood processing, and seafood markets), and Chandeleur-Breton Sound parishes generally **employ fewer people in the recreation sector** (includes charter and recreational fishing, boat tours, marinas, campsites, hotels, and restaurants), than most Gulf coastal counties[10].




The living resources sector makes up
0.17% and 0.08% of GDP in Plaquemines and Tammany parishes, respectively[11].

The recreation sector makes up
0.23% to 5.2% of GDP in Chandeleur-Breton Sound parishes.

*Note:* Economic data on the living resources sector for Hancock County, Orleans Parish and St. Bernard Parish are not available due to confidentiality issues.

## Recreation

Recreational activities related to healthy estuaries are popular among residents and visitors of Louisiana. According to a 2011 survey[15]:

Saltwater anglers spent an average of **$321 per person** on fishing trips and equipment.

**196,000 people** participated in saltwater fishing in Louisiana.

**Popular fish** species include the red drum and the seatrout.

**97,000 people** participated in waterfowl hunting in Louisiana.

## Hypoxia in Chandeleur and Breton Sounds

Since 2008, monitoring in Chandeleur and Breton Sounds has revealed the development of seasonal bottom hypoxia[3], or deficiency in the amount of dissolved oxygen. This can have far-reaching impacts on fisheries.

Hypoxia in Louisiana waters has been shown to:

- Increase the price of large brown shrimp relative to small brown shrimp.[12]
- Affect brown shrimp spawning and migration patterns.[13]
- Negatively impact brown shrimp catch.[14]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