

# Vegetation Types in Coastal Louisiana in 2007

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## Methodology

There are numerous datasets available to conduct analyses of marsh change in coastal Louisiana. Most prior studies have used either National Wetlands Inventory data or vegetation type maps produced by O'Neil in 1949; Chabreck and others in 1968, Chabreck and Linscombe in 1978; 1988, and 1997; and Linscombe and Chabreck (n.d.) in 2001. During the summer and fall of 2007, the U.S. Geological Survey (USGS), the Louisiana State University Agricultural Center, and the Louisiana Department of Wildlife and Fisheries (LDWF) Fur and Refuge Division jointly completed an aerial survey to collect data on 2007 vegetation types in coastal Louisiana. The current map presents the data collected in this effort.

The 2007 aerial survey was conducted from a 206 Bell Jet Ranger helicopter using techniques developed over the last thirty years while conducting similar vegetation surveys. Transects flown were oriented in a north-south direction and spaced 1.87 mi (3 km) apart. Sampling sites were located at a spacing of 0.5 miles (.8 km) along these transects. Transects covered coastal marshes from the Texas State line to the Mississippi State line and from the

northern extent of fresh marshes to the southern end of saline (saltwater) marshes on the beaches of the gulf or of coastal bays. Navigation along these transects and to each sampling site was accomplished by using Global Positioning System (GPS) technology and geographic information system (GIS) software operating on a ruggedized laptop, a procedure that was established during the 1997 vegetation survey by Chabreck and Linscombe.

As the surveyors reached each sampling station, dominant plant species were listed and their abundance classified. Based on species composition and abundance each marsh sampling station was assigned a marsh type: fresh, intermediate, brackish, or saline (saltwater) marsh (Visser and others, 1998, 2000, 2002). The data generated from the survey were later delineated by using the same base map as that used to map the data collected during the 1997 (Chabreck and Linscombe) and 2001 (Linscombe and Chabreck, n.d.) surveys. Delineations of marsh boundaries usually followed natural levees, bayous, or other features that impede or restrict water flow.

## References

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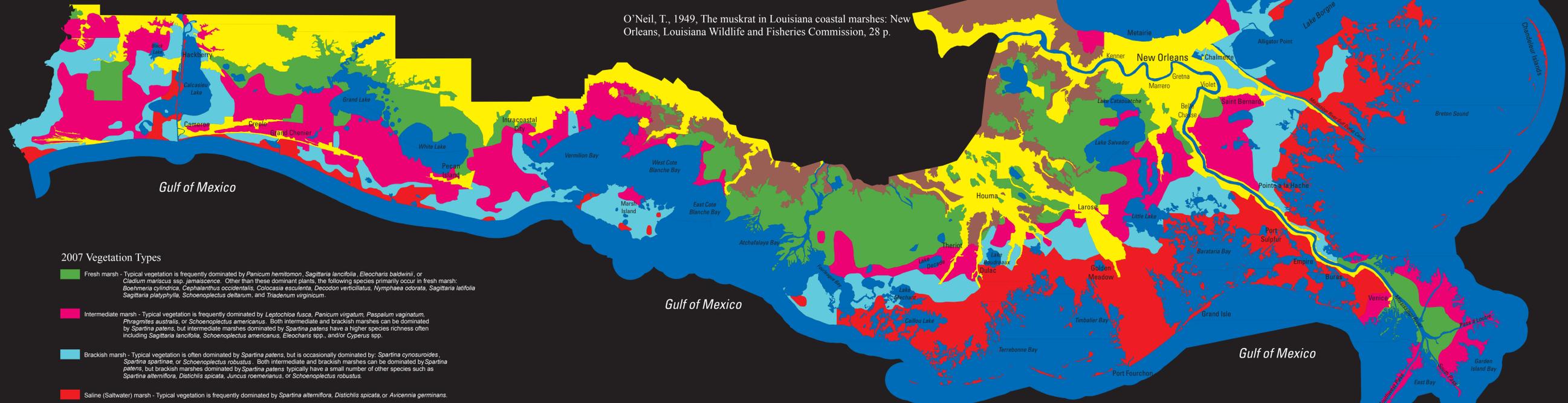
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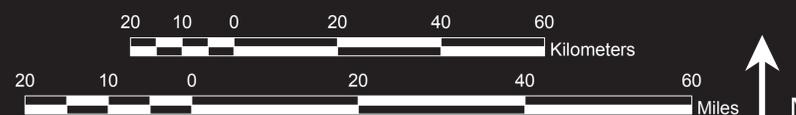
Sasser, C.E., Visser, J.M., Mouton, Edmond, Linscombe, Jeb, and Hartley, S.B., 2008, Vegetation types in coastal Louisiana in 2007: U.S. Geological Survey Open-File Report 2008-1224, 1 sheet, scale 1:550,000.



## 2007 Vegetation Types

- Fresh marsh - Typical vegetation is frequently dominated by *Panicum hemitomon*, *Sagittaria lancifolia*, *Eleocharis baldwinii*, or *Cyperus mariscus* ssp. *jamaiscense*. Other than these dominant plants, the following species primarily occur in fresh marsh: *Boehmeria cylindrica*, *Cephalanthus occidentalis*, *Colocasia esculenta*, *Decodon verticillatus*, *Nymphaea odorata*, *Sagittaria latifolia*, *Sagittaria platyphylla*, *Schoenoplectus detarum*, and *Triadenum virginicum*.
- Intermediate marsh - Typical vegetation is frequently dominated by *Leptochloa fusca*, *Panicum virgatum*, *Paspalum vaginatum*, *Phragmites australis*, or *Schoenoplectus americanus*. Both intermediate and brackish marshes can be dominated by *Spartina patens*, but intermediate marshes dominated by *Spartina patens* have a higher species richness often including *Sagittaria lancifolia*, *Schoenoplectus americanus*, *Eleocharis* spp., and/or *Cyperus* spp.
- Brackish marsh - Typical vegetation is often dominated by *Spartina patens*, but is occasionally dominated by *Spartina cynosuroides*, *Spartina spartinea*, or *Schoenoplectus robustus*. Both intermediate and brackish marshes can be dominated by *Spartina patens*, but brackish marshes dominated by *Spartina patens* typically have a small number of other species such as *Spartina alterniflora*, *Distichlis spicata*, *Juncus roemerianus*, or *Schoenoplectus robustus*.
- Saline (Saltwater) marsh - Typical vegetation is frequently dominated by *Spartina alterniflora*, *Distichlis spicata*, or *Avicennia germinans*.
- Other - Nonmarsh
- Swamp
- Water

SCALE 1:550,000



Vegetation Type	Acres	Hectares
Fresh marsh	964,017	390,138
Intermediate marsh	1,043,258	422,207
Brackish marsh	764,411	309,357
Saline (Saltwater) marsh	848,989	343,586
Other	1,343,326	543,644
Swamp	464,805	188,107
Water	4,606,864	1,864,398
<b>Total</b>	<b>10,035,670</b>	<b>4,061,436</b>

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