

Mardi Gras Pass, A New Geographic Feature on Louisiana's Coast



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History of Topographic Mapping in Louisiana

- 1928 - Act 159 establishes topographic mapping as a responsibility of the State Engineer.
- 1974 – Act 159 of 1928 is adopted by reference into the new Louisiana Constitution and eventually becomes the responsibility of DOTD.
- 1990s - DOTD has been the lead in Louisiana for the USGS Cooperative Topographic Mapping Program since its inception. This partially updated 12-20 paper maps (of ~900) in Louisiana. No digital data were ever updated.
- In 2007 USGS declares:

“We have 5 quads to finish up for Louisiana, and have no plans to do anymore, anywhere.”

Act 782 of 2010 and Act 409 of 2012

La. R. S. 48:36 Topographic Mapping

- DOTD shall develop and maintain a statewide digital geospatial database
- Act as the state authority for geographic names
- Set standards for the mapping of topographic features
- Plan and manage data collection for incorporation into a statewide database
- Promulgate rules and regulations... as are necessary for the planning and managing of the geospatial data.

Topographic Mapping Today in Louisiana

- DOTD has promulgated rules establishing standards to build and maintain the Geodatabase of Louisiana (Rules and Regulations - Louisiana Administrative Code (LAC 70:XXIX, Chapter 1, page 269).
- DOTD has finished complete revisions of two statewide topographic foundation layers:
 - Water - in the form of the National Hydrology Dataset (NHD)
 - Transportation
- DOTD and the US Bureau of the Census have signed an MOU establishing the Department as the official source of geospatial data for Louisiana.

Why Is Louisiana's Landscape so Dynamic?

- Louisiana is largely comprised of the Mississippi River Delta
 - One of the most active deltaic systems in the world
 - Deltaic geology is inherently unstable
 - The Birdfoot Delta juts far into the Gulf of Mexico

These conditions make coastal Louisiana susceptible to hurricane and tropical storm damage

- Subsidence
 - Anisotropic and heterogeneous effects of subsidence create a response that is spatially dispersed and inconsistent across the landscape
- Sea Level Rise
 - Compounds all of the above

All of these factors combine to continuously create new geographic features, while, changing and destroying old geographic features

Why Are Up To Date Geospatial Data Important to Louisiana?

- Geospatial data provide information about where people, infrastructure, and government services are located and how to connect them
- Geospatial data provide a framework for transparency, planning, and delivering services. It promotes good government and interaction across all levels of government
- Geospatial data provide information essential to plan, promote, and market economic development opportunities through “site-selection” applications
- Geospatial data provides a common operational picture (COP) for hazard mitigation, emergency preparation, and disaster response

The "AAAAA" Data Standard

<u>Factor</u>	<u>Contribution to Data Quality</u>
Accurate	The data adequately represents the state of the world in space and time. Locations have sufficient precision for their scale of use and data are current.
Authoritative	The source of the data provides sufficient quality control to ensure its veracity and reliability.
Actionable	The data are well documented with metadata, require little further assessment or manipulation, and can be put to immediate use.
Accessible	The data are discoverable and available through direct download or Service Oriented Architecture (SOA). Data can be searched directly, selected, and accessed without intervention by its provider.
Affordable	The data can be accessed with little or no cost to the user.

Importance of Geographic Names

- Standardization is important to eliminate confusion, uncertainty, and misunderstanding which may occur when:
 - More than one name is used for the same place or feature
 - When the same name is applied to different features
 - The spelling of a name is inconsistent
- Provides incalculable savings by increasing the efficiency of government and other institutions with respect to time and money

Council on Geographic Names Authority (<http://cogna50usa.org>)

Every Geographic Name Has a Story

- Landforms and geographic locations get their names from many sources:
 - People
 - » Well-known local people
 - » Historical figures
 - » Land property owners
 - Events that happened near the location
 - » Military battles
 - » Disasters
- To be “official” the US Board of Geographic Names has to know the story and determine it is significant.

How does Mardi Gras Pass get its name?

Mardi Gras Pass

- What is a pass?

A geographic feature defined as a narrow passage way through a barrier

(Longman dictionary of geography human and physical, 1985)

- Why Mardi Gras?

Formed on Mardi Gras Day, February 21, 2012

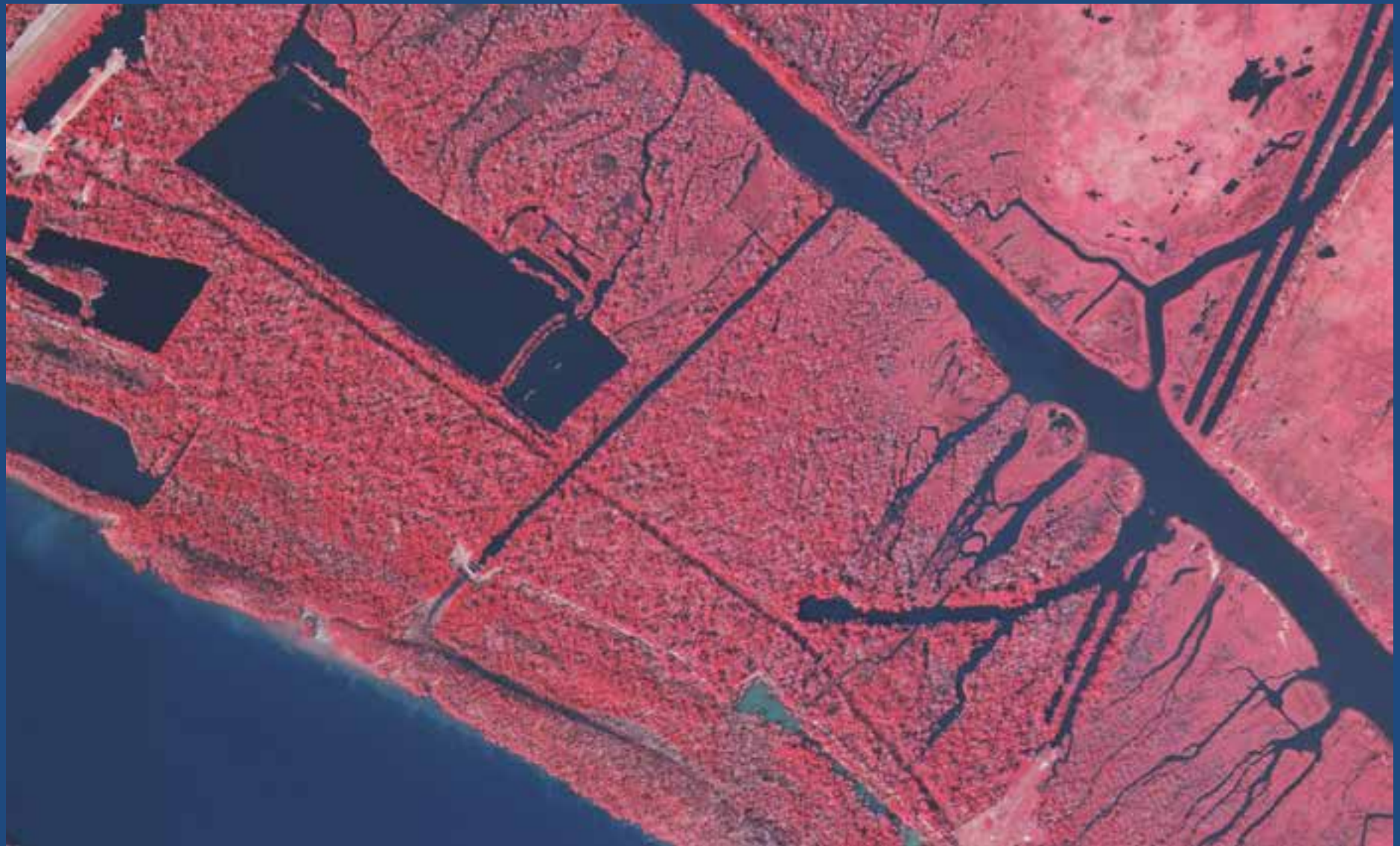
- Why is it important and needs a name?

- It is the first natural opening in the Mississippi River levee in recent history
- Recognized and used by local population
- Provides a navigable link to the Gulf of Mexico

Mardi Gras Pass Vicinity *ca.* 2000



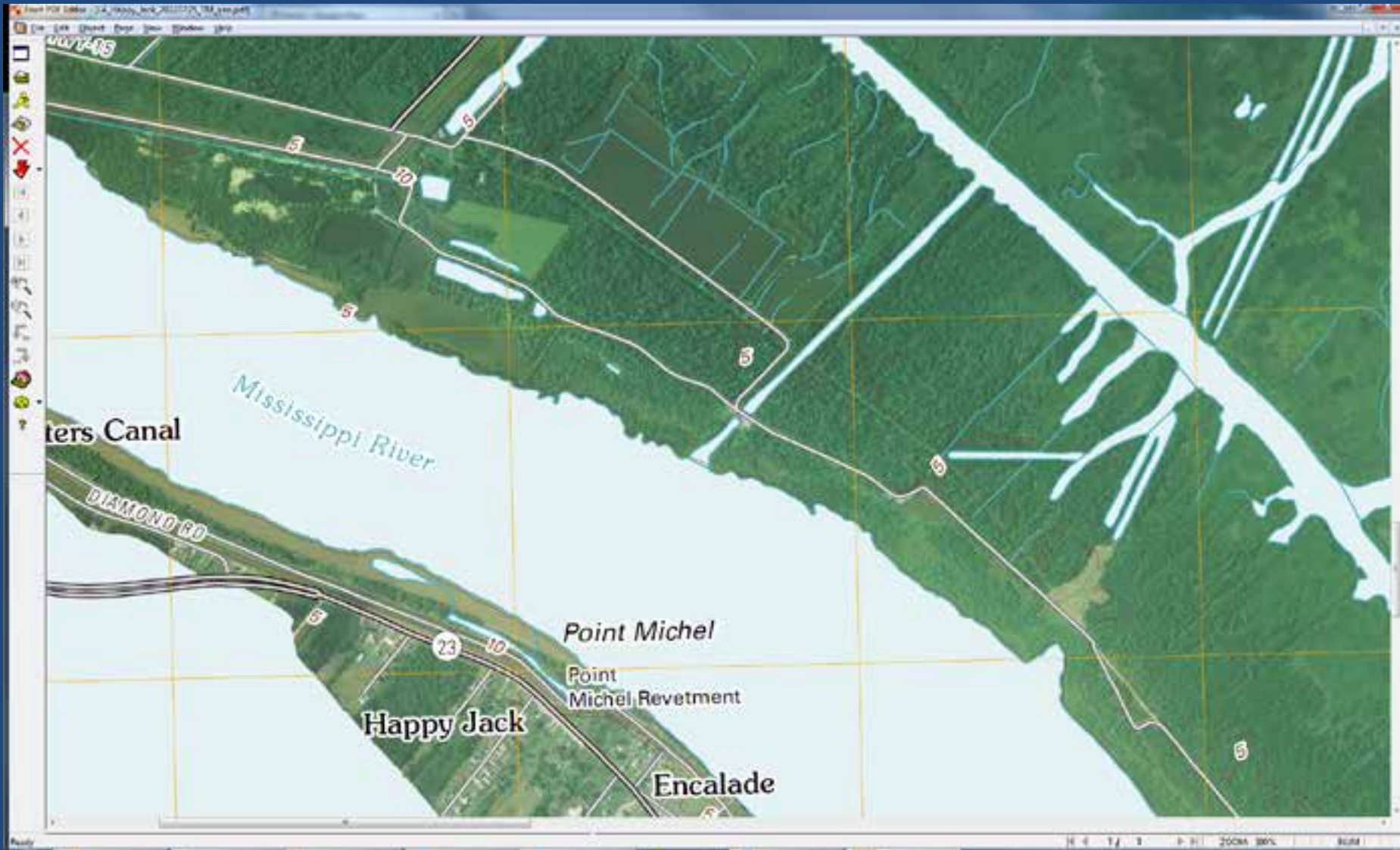
Mardi Gras Pass Vicinity *ca.* 2005



Mardi Gras Pass Vicinity *ca.* 2008

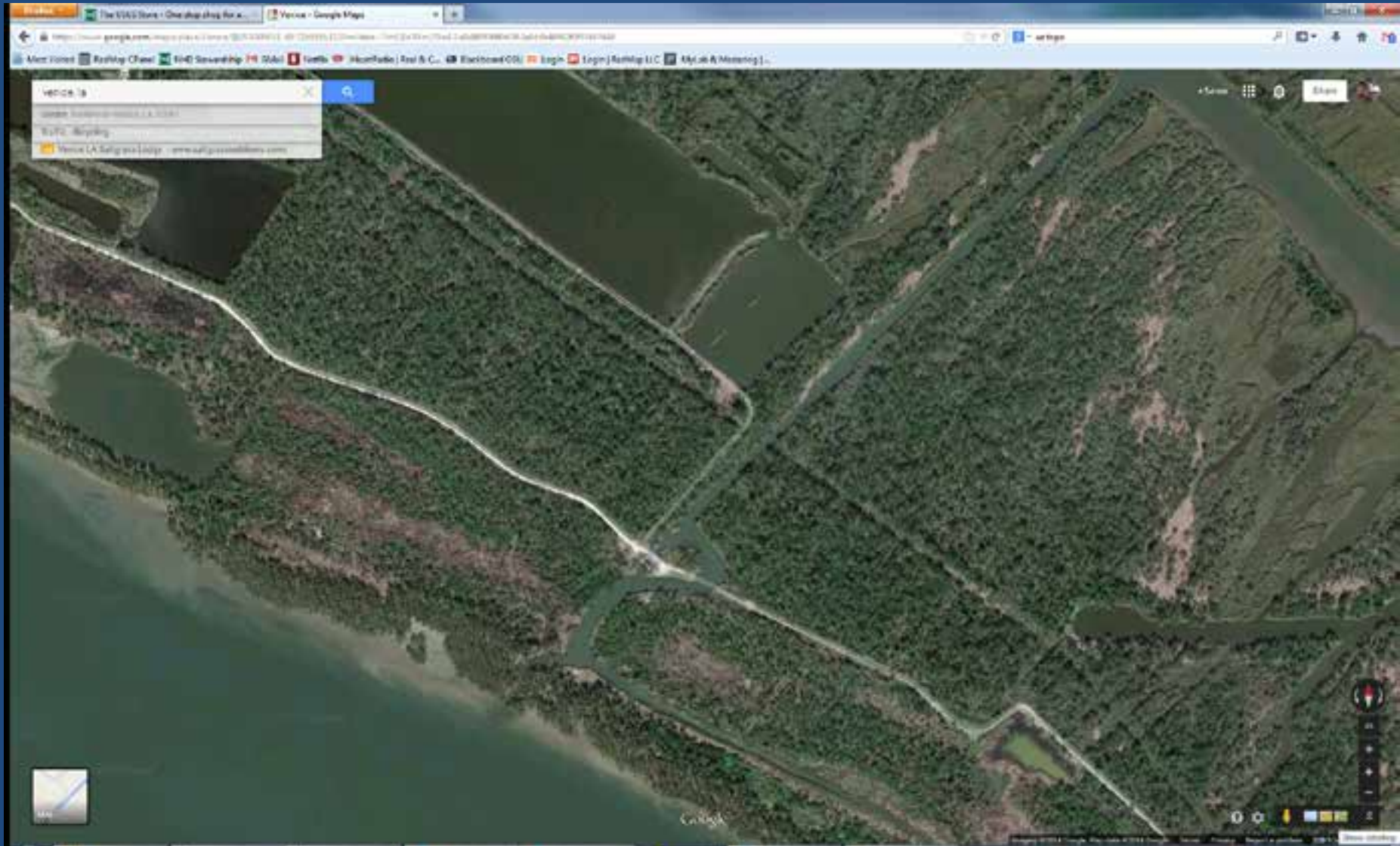


Mardi Gras Pass – Digital US Topo (2012)

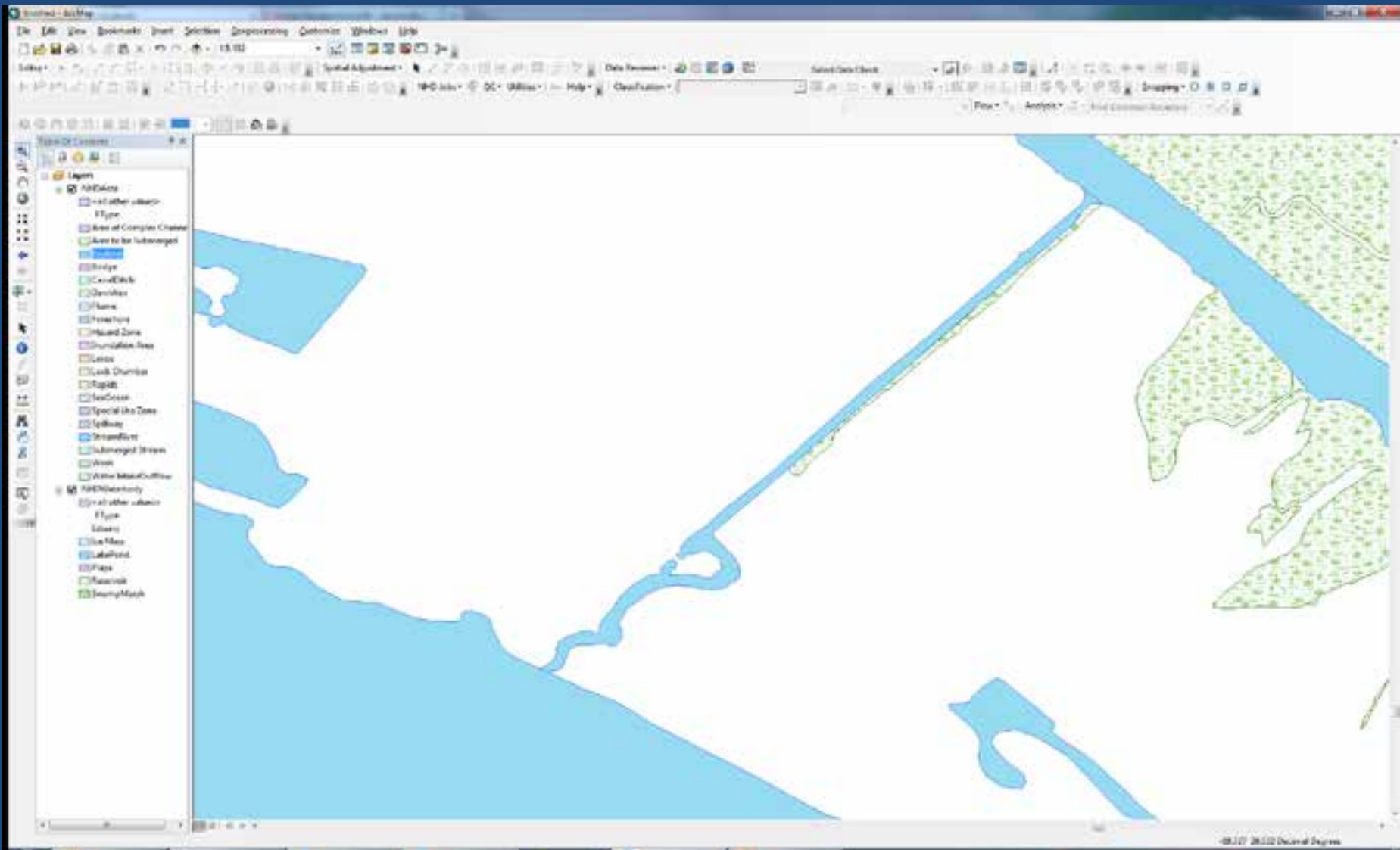


Topo indicates imagery date of May, 2010

Mardi Gras Pass – Google Imagery (2014)



Mardi Gras Pass – DOTD NHD (2014)



Mardi Gras Pass Storymap

The rest of the story...

Mardi Gras Pass, Louisiana
A new Louisiana geographic feature proposal to the US Board on Geographic Names

1 Where is Mardi Gras Pass?

Mardi Gras Pass is located on the western side of the Mississippi River and is the first distributary to develop in the river's delta. In many decades, the pass formed on Mardi Gras Day 2012, an opening in the Atchafalaya Spillway, allowing water to flow freely from the river to the Gulf of Mexico. Southeast Louisiana is dominated by deltaic geology and Mardi Gras Pass is largely the result of geomorphological changes that occur in a deltaic environment. Across the Louisiana coastal landscape, in some places land is accreted (built), while in other places it is subject to subsidence (sinking). To

2 Dynamic Coast of Louisiana

3 Mardi Gras Pass Vicinity ca. 2000

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For more information refer to the LaDOTD GIS web page <http://gis.dotd.la.gov>