

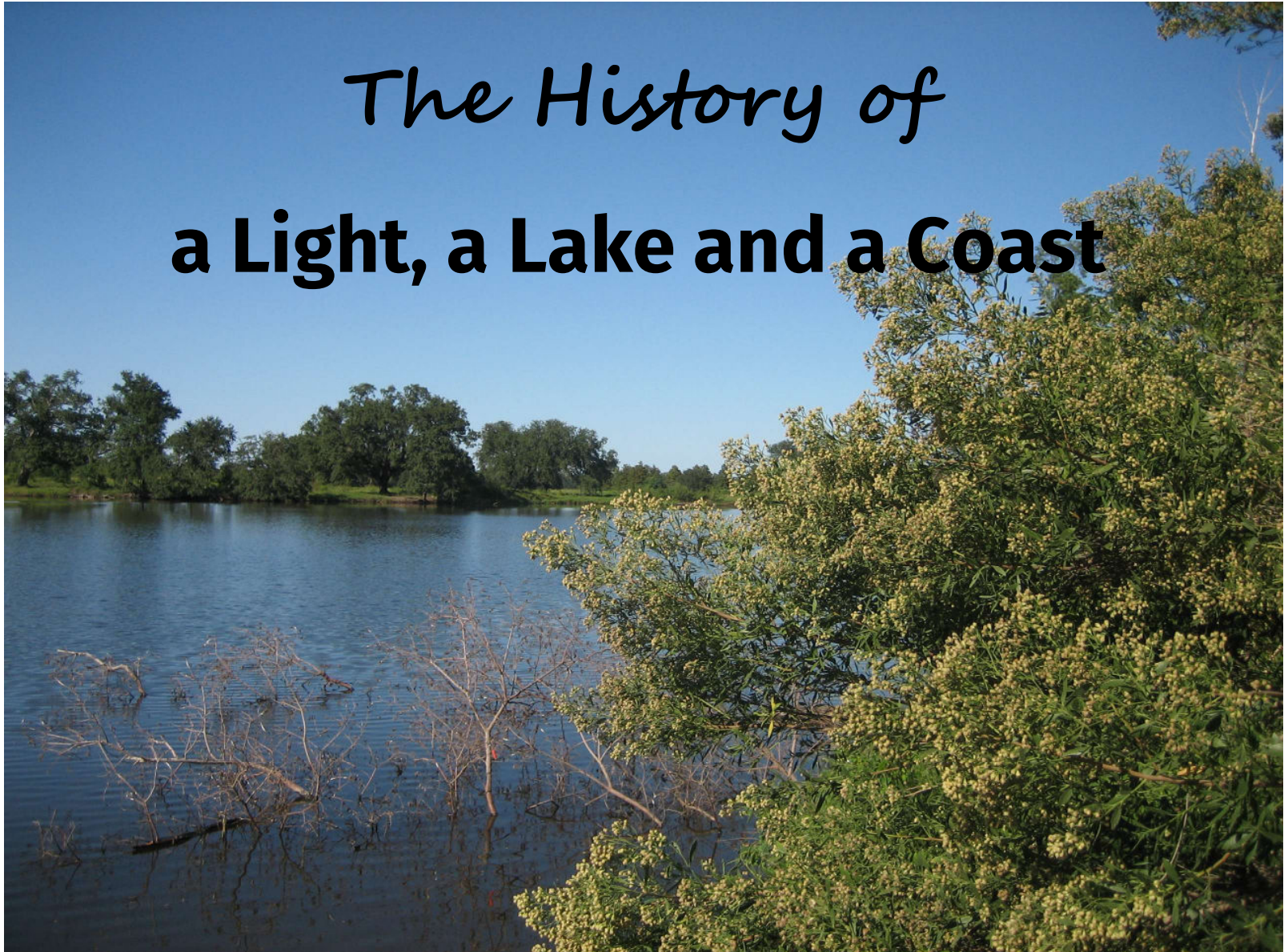
*July 8, 2025*

Kristi L. Trail, P.E.  
Executive Director  
Pontchartrain Conservancy

# Pontchartrain Conservancy



*The History of*  
**a Light, a Lake and a Coast**



# Kristi Trail, P.E.

- Native New Orleanian
- Lifelong Environmentalist
- Grew up on Lake Pontchartrain
- LSU Grad (BS & MS Civil Engineering)
- Worked in Engineering for 20 years
- Involved with many local non-profits
- Still new!

## Past New Orleanians of the Year: 1983-2017

1983 — Joe Canizaro

1984 — Darryl Berger

1985 — Gary Groesch

1986 — Oliver Houck

1987 — Tom Benson

1988 — Dr. Mervin Trail

***gambit***



# WHO WE ARE

Pontchartrain Conservancy is a non-profit organization consisting of a board of directors representing Basin parishes and regulatory agencies.

Our **Vision** is an environmentally sustainable, prosperous, and resilient region.

Our **mission** is to drive environmental sustainability and stewardship through scientific research, education, and advocacy.



## RESEARCH

Scientific research and action is our comparative advantage. It will harness this expertise to improve water quality in the basin and to promote the coastal integrity upon which the region depends.

## EDUCATION

Pontchartrain Conservancy will draw on its scientific evidence and findings to develop innovative environmental curriculum to educate students from grade school to college as well as teachers.

## ADVOCACY

Pontchartrain Conservancy will leverage its depth of scientific knowledge to engage officials and businesses to implement solutions to water management and coastal land loss, to support better legislation, and to invest in practical and sustainable outcomes. We will also provide the public with digestible data and analysis, as well as opportunities for engagement on environmental issues through volunteering, tours, recreation, and events.

# THE PONTCHARTRAIN BASIN



**1718: Jean Baptiste Le Moyne, Sieur de  
Bienville founded the city of New  
Orleans on the high banks of the  
Mississippi River.**



1794

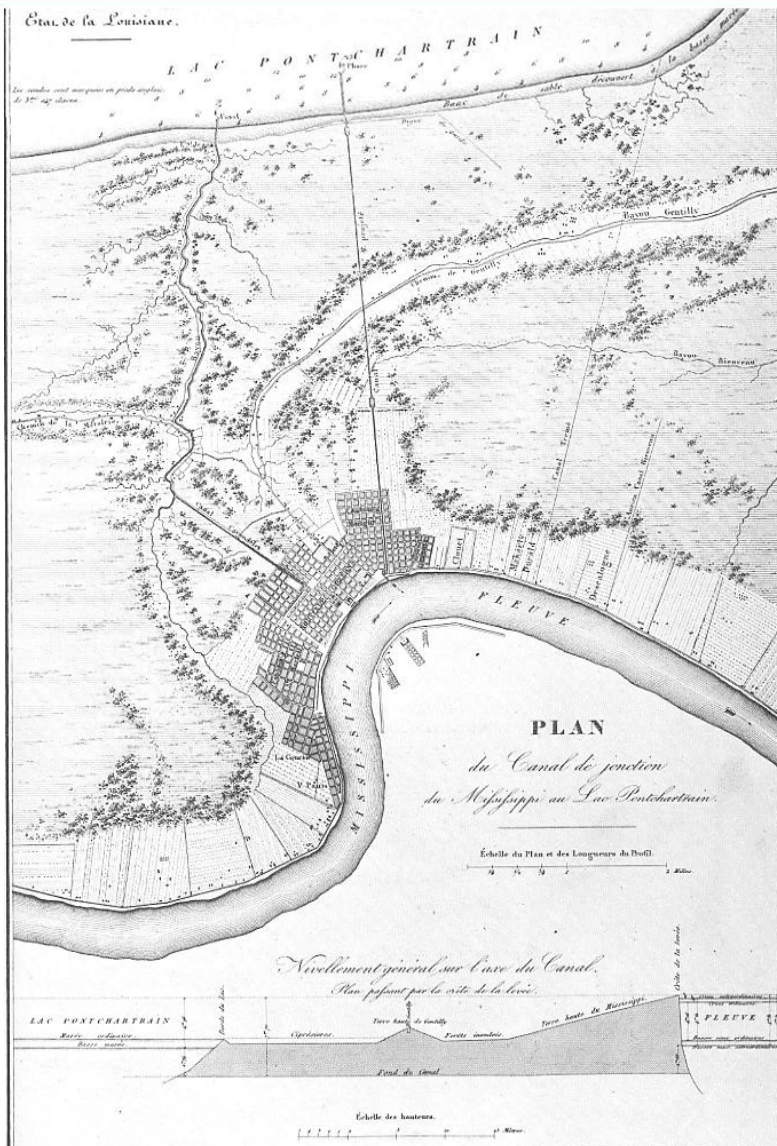
**The Carondelet Canal:**  
built to connect the city  
of New Orleans with  
Bayou St. John.



Figure 11. Carlos Trudeau's Map of New Orleans, recopied in 1875, shows how New Orleans commands the portage from the Mississippi to the headwaters of Bayou St. John and thence by water to Lake Pontchartrain. The portage is now Bayou Road. Canal Carondelet was later deepened and used for navigation. The turning basin can be seen below one of the towers of the wall. Peter de Marigny's estate was still not subdivided. "Alluvial Gravel" along the riverbank is the *batture*. (Courtesy of the Louisiana Collection, Special Collections Division, Tulane University Library)

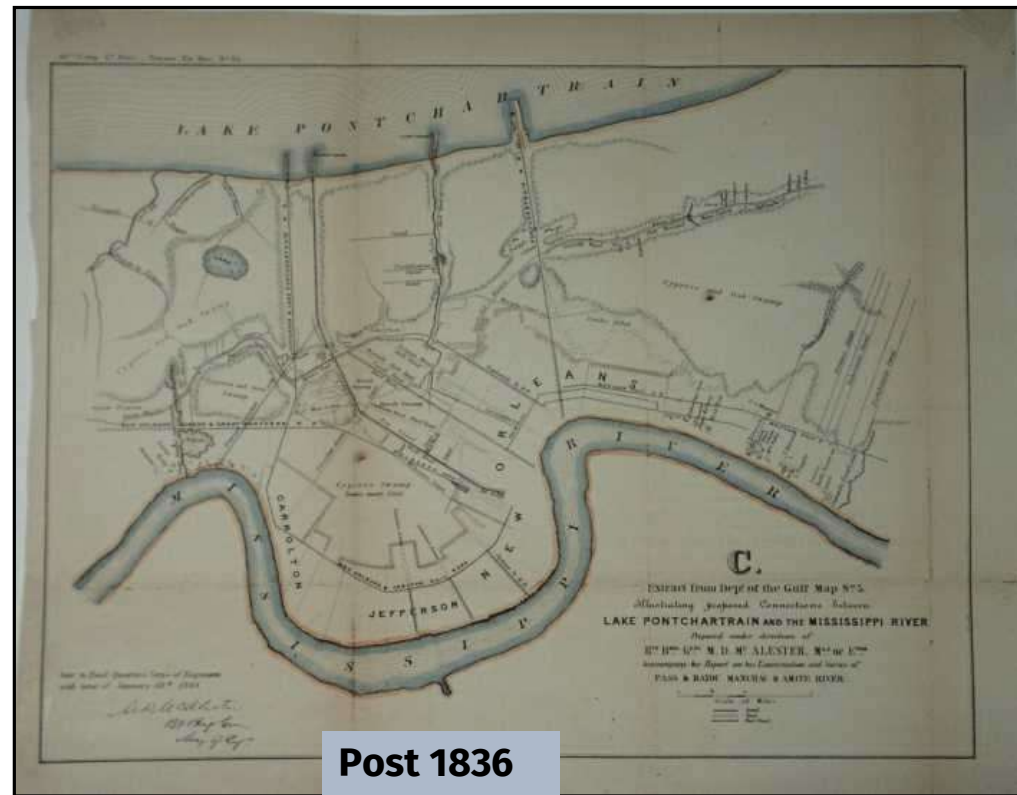
Lewis (1976)

Courtesy: Library of Congress



# New Orleans: The Beginning

**1803**  
**Louisiana Purchase**  
**New Orleans: busy**  
**trade city,**  
**handling much of**  
**the continent's**  
**trade.**



Courtesy: Library of Congress

**1830's**

**New Basin Canal:** Built by the Americans to gain more access to Lake Pontchartrain and the Gulf Coast trade. They used Irish immigrants willing to work for \$1.00/day.

**The canal was marked by a light on a cypress tower.**



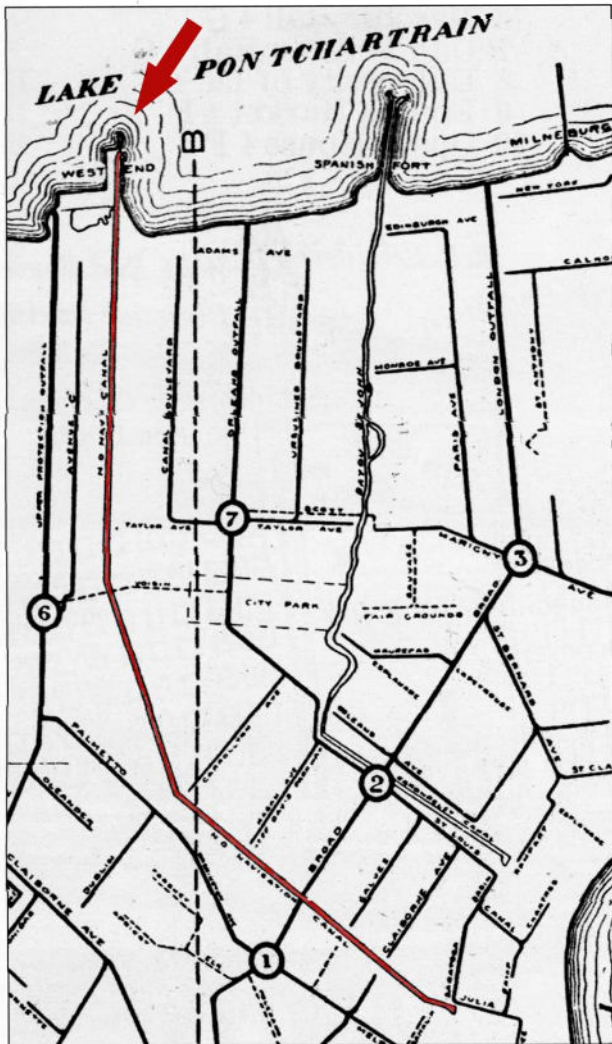
# New Basin Canal



<http://nolavie.com/knowlouisiana-irish-in-louisiana-86944/>



<http://www.theseamericans.com/exterior/detroit-publishing-collection-new-orleans-la-1890-1906/>



The people lived on the high ground with commerce coming from the lake.

# Four Lighthouses

1837: simple wooden tower marks entrance to newly opened New Basin Canal

**1855:** cottage-type lighthouse erected



1879: two-story Southern Yacht Club erected

**1890:** three-story lighthouse built

2005-2013: 1890 lighthouse damaged, deconstructed, and reconstructed on original site



## 1855: The New Canal Lighthouse.

A one story building  
with a Fresnel lens  
replaced the  
cypress tower.



Women were often “offered” the job of lightkeeper.

The New Canal Lighthouse had five women lightkeepers.

Mrs. Elizabeth S. Beattie 1847

Mrs. Jane O’Driscoll 1850-1853

Mrs. Mary F. Campbell 1869-1893

Mrs. Caroline Riddle 1893-1924

Mrs. Margaret Norvell 1924-1932



Margaret “Madge” Norvell



Margaret Norvell is known for the many lives she saved. “I have often rung my fog bell,” she said, “to get help for overturned boats or to signal directions to yachts.” She kept chickens, a dog and a talking parrot. In her living room she had many books and a beautiful piano.



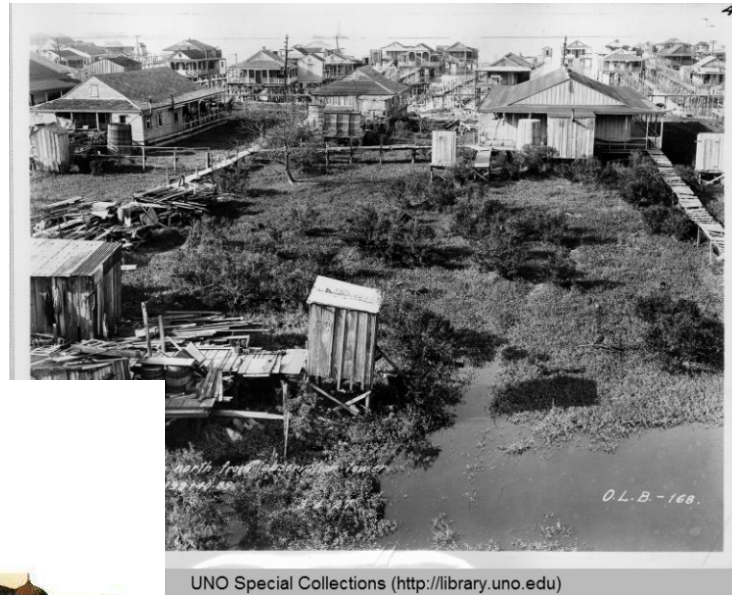


Ca. 1890, New Orleans Public Library



UNO Special Collections (<http://library.uno.edu>)

Through the 1800's we lived on the high ground and recreated on the lakefront.

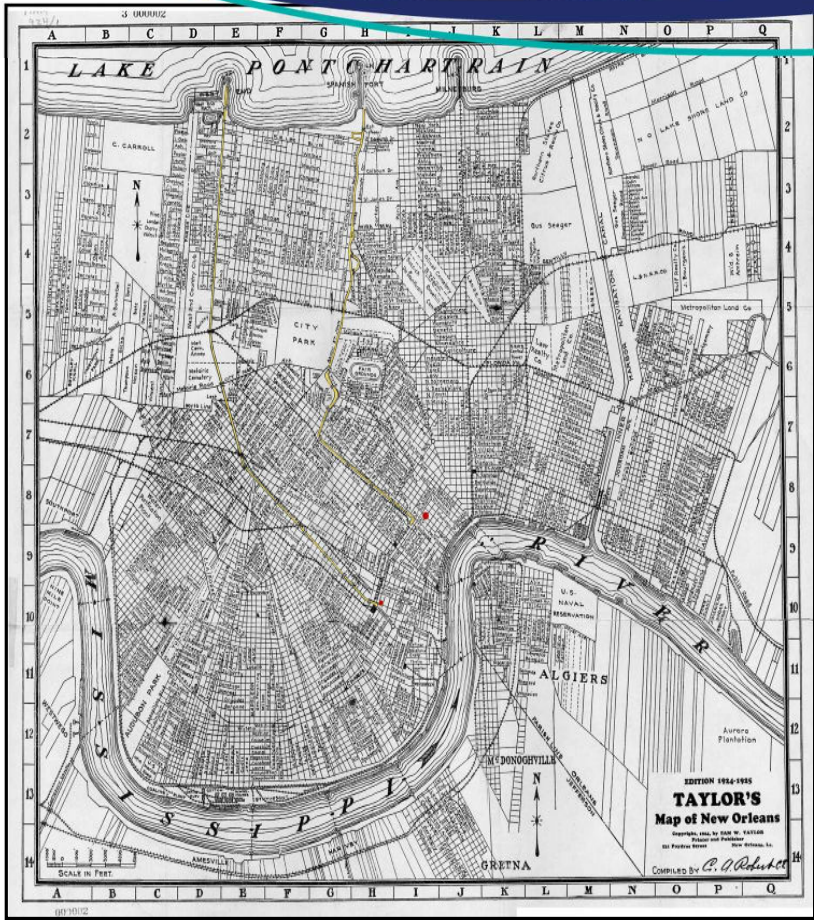
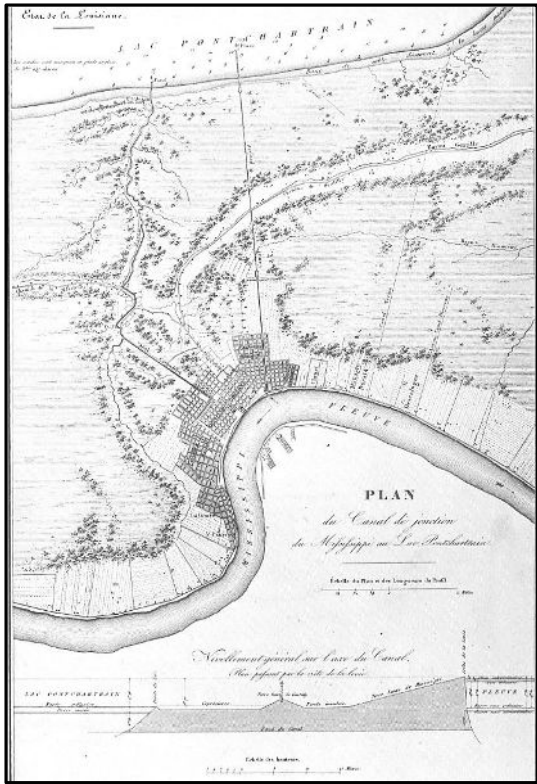




**1913**  
**Drainage pumps**  
**invented by Baldwin**  
**Wood**

**Swamps and  
marshes of New  
Orleans were  
drained.**





# 1924 Plan Map



UNO Special Collections (<http://library.uno.edu>)



UNO Special Collections (<http://library.uno.edu/>)



# 1999: U.S. Coast Guard



# 2005:

Coast Guard relocates to Bucktown Harbor in 2003, Negotiations with (then) LPBF to use lighthouse as Education Center





# Reconstruction

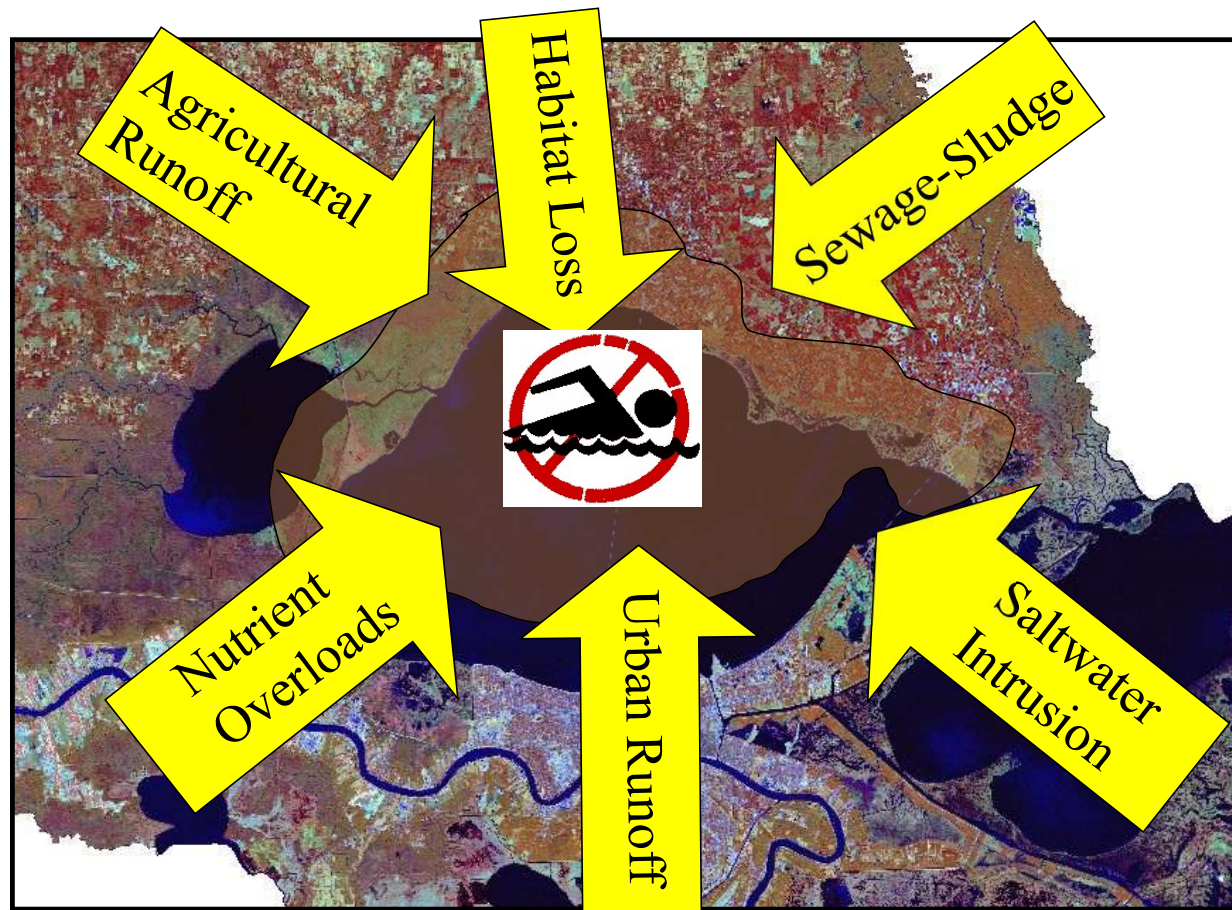




The Campaign to:

**SAVE OUR LAKE**  
**LAKE PONTCHARTRAIN BASIN FOUNDATION**

By 1989 - our lake was challenged by:



# And we went from:



To:



In 1989 Lake Pontchartrain Basin Foundation was put in place.

Goal: work on BASIN ISSUES using SOUND SCIENCE.

- Water Quality
- Habitat
- Coastal Issues



# Water Quality Programs

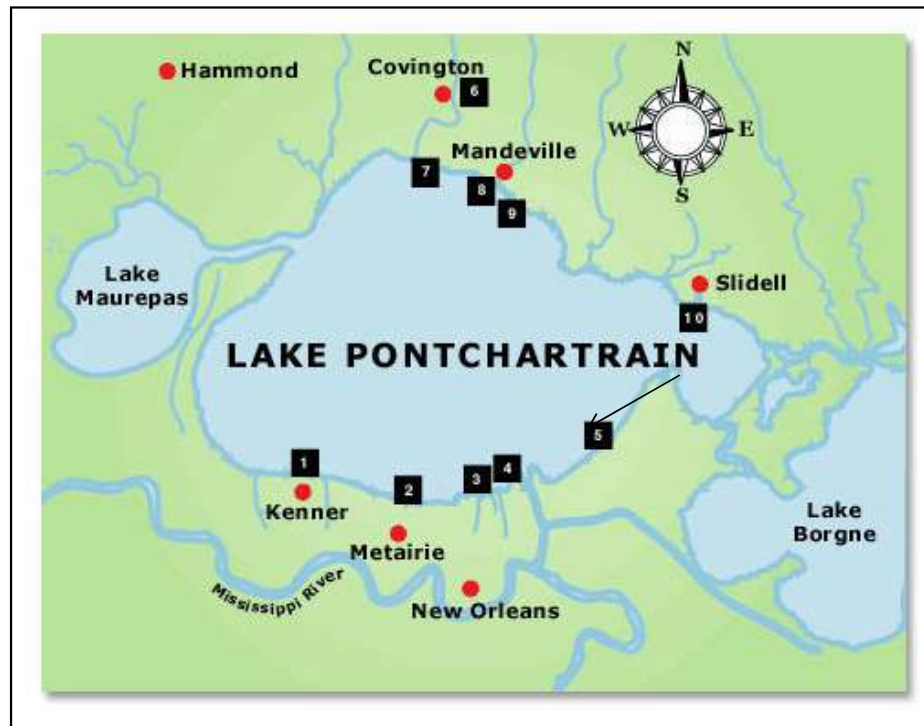
In the 1990's:

- worked to stop shell dredging
- worked to get a moratorium against new oil and gas drilling in the lake.
- worked with dairy farms to reduce runoff from cattle

# BY 2001 began Recreational Water Monitoring Program

Began program to monitor recreational sites around Lake Pontchartrain Basin for:

- \* *Water Temperature*
- \* *Dissolved Oxygen*
- \* *Salinity*
- \* *Turbidity*
- \* *Fecal Coliform*

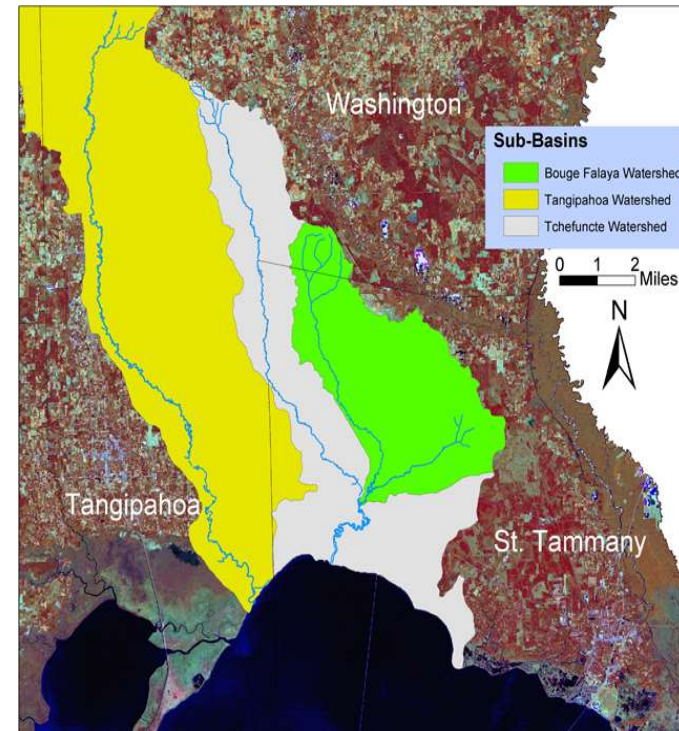


Sites monitored weekly, over 7,500 samples have been taken in accordance with LDH and EPA recreational criteria

## In 2002 - began Sub-Basin Pollution Source Tracking

Uses a Watershed Approach, working in the sub-watersheds

- Monitor the water quality
- Track pollution sources
- Use GIS/Mapping
- Educate
- Partner with agencies (LDEQ, LDH, municipalities)



## By 2004 - Began offering Wastewater Treatment Plant Assistance



PC has assisted over 1,000 small wastewater treatment plants in the past 15+ years.

# Getting Data to the Public:

Data is released every week to the public by newspaper (The New Orleans Advocate Saturday Metro section) and our website.



## Weekly Sampling Sites



## This Week's Numbers

This report is based on conditions found on the sampling day (Tuesday) only.

Sites	Fecal Coliform (MPN)	Water Temp (°F)	Water Visibility (feet)	Salinity (ppt)	Dissolved Oxygen (mg/l)
1. Laketown	79	81.3	4.1	2.7	5.39
2. Bannabel Boat Launch	46	81.5	4.92 VAB	3.3	5.81
3. Old Beach Bayou St. John	130	81.8	3.28 VAB	3.8	5.14
4. Pontchartrain Beach	49	81.8	3.28 VAB	3.7	5.51
5. Lincoln Beach	2	82.4	3.28 VAB	2.2	6.36
6. Bogus Falaya Park	1600	72.8	0.82	0.0	6.54
7. Tchefuncte Boat Launch	540	75.5	1.64	0.1	4.09
8. Bayou Castine	1600	77.7	1.64	0.1	3.12
9. Fontainebleau Beach	20	83.4	1.64	1.0	6.55
10. Northshore Beach	240	87.8	1.64	1.6	7.05

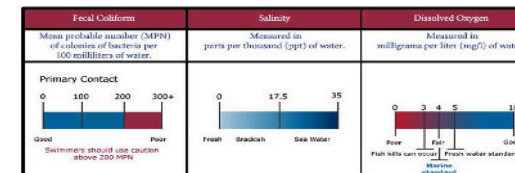
Fontainebleau MPN provided by DHH in cooperation with LPBF as part of the Beach Monitoring Program

### Rainfall Runoff Warning:

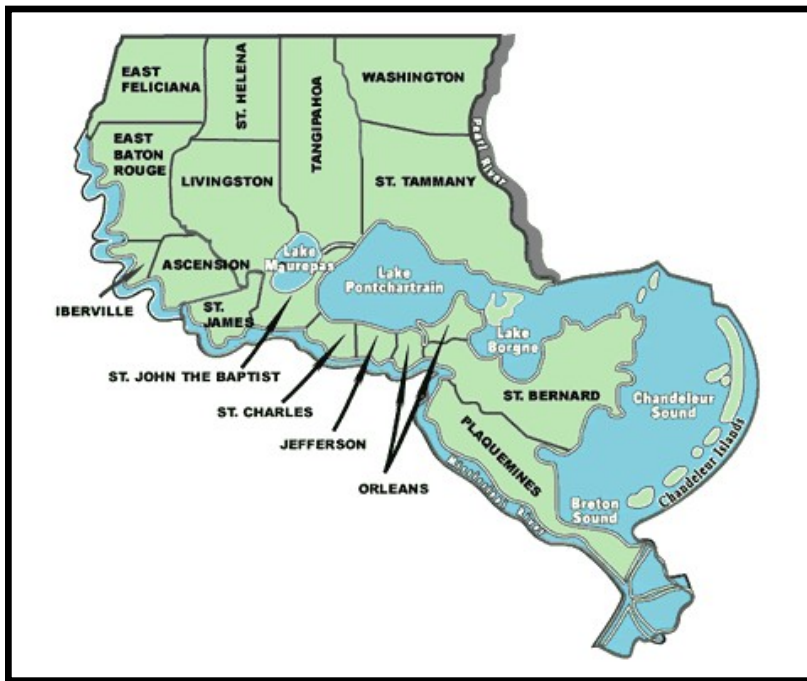
The Lake's water quality is directly related to rainfall runoff. If it has rained in your area in the past 3 days, the runoff could pollute the Lake.

## What Do The Numbers Mean?

The following criteria are based on are based on the Department of Environmental Quality



By 2005 - achieved a clean  
Lake & Basin



**Success!!!!**

In 2006 the lake  
was removed  
from EPA's  
impaired water  
body list

# The Campaign to:



Through the 1900's  
Louisiana's land became critically important to the  
rest of the country



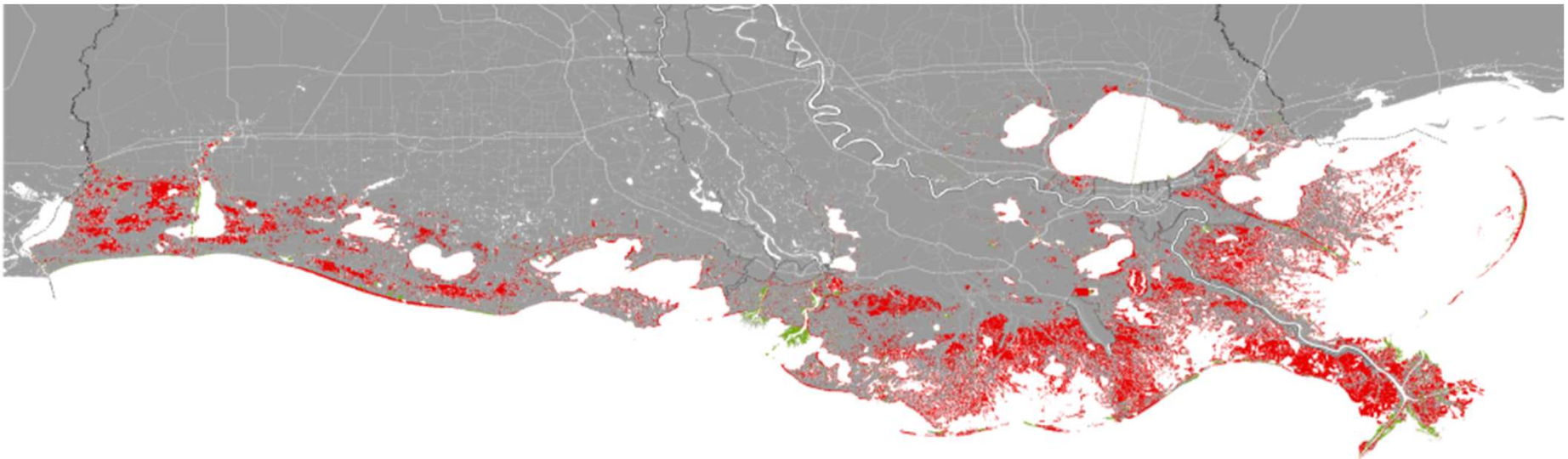
Unfortunately man did not protect the area  
that provided  
so much to so many.



Now in the 21st Century  
the Pontchartrain Basin &  
South Louisiana  
face land loss we created.



# LOUISIANA IS FACING A COASTAL CRISIS



Historic Land-Water Change from 1932-2016  
Couvillion et al (USGS), 2017

A satellite map of Southeast Louisiana, showing a mix of green marshland, brown solid land, and dark blue water. A winding river or canal cuts through the landscape. In the top right corner, there is white text. In the bottom left corner, there is another line of white text.

**Southeast Louisiana  
SHOWING BOTH  
SOLID LAND & MARSH**

**Latest maps and data from USGS and Esri**

**Southeast Louisiana  
SHOWING  
SOLID LAND ONLY**



Latest maps and data from USGS and Esri



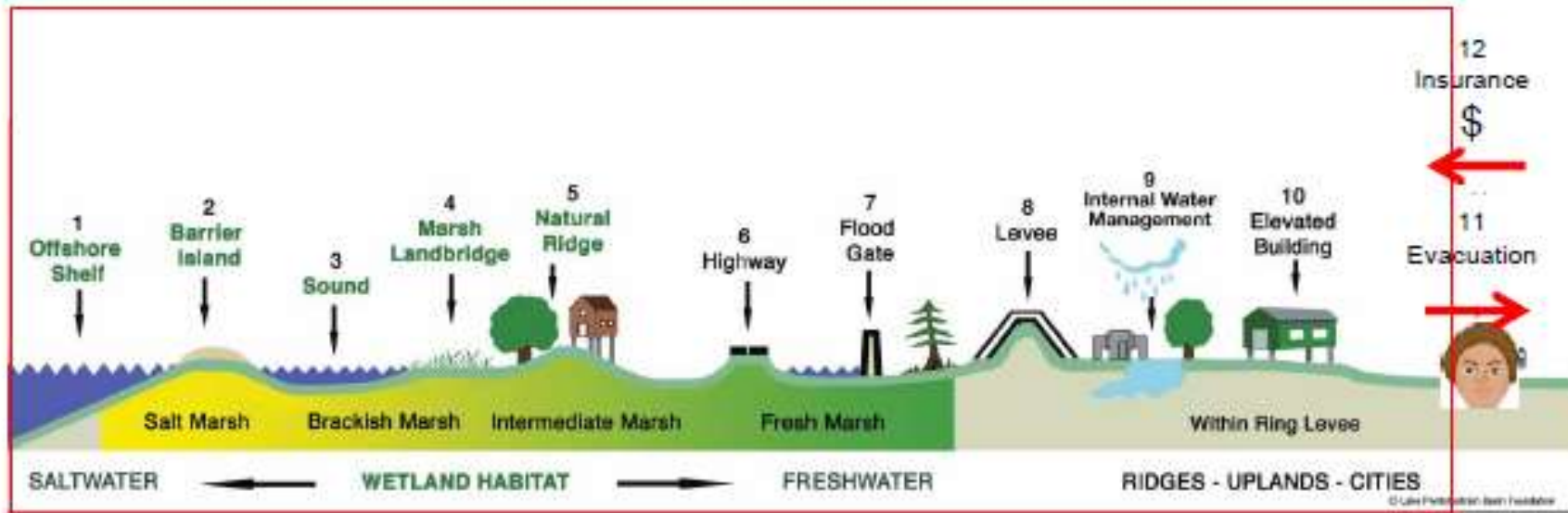


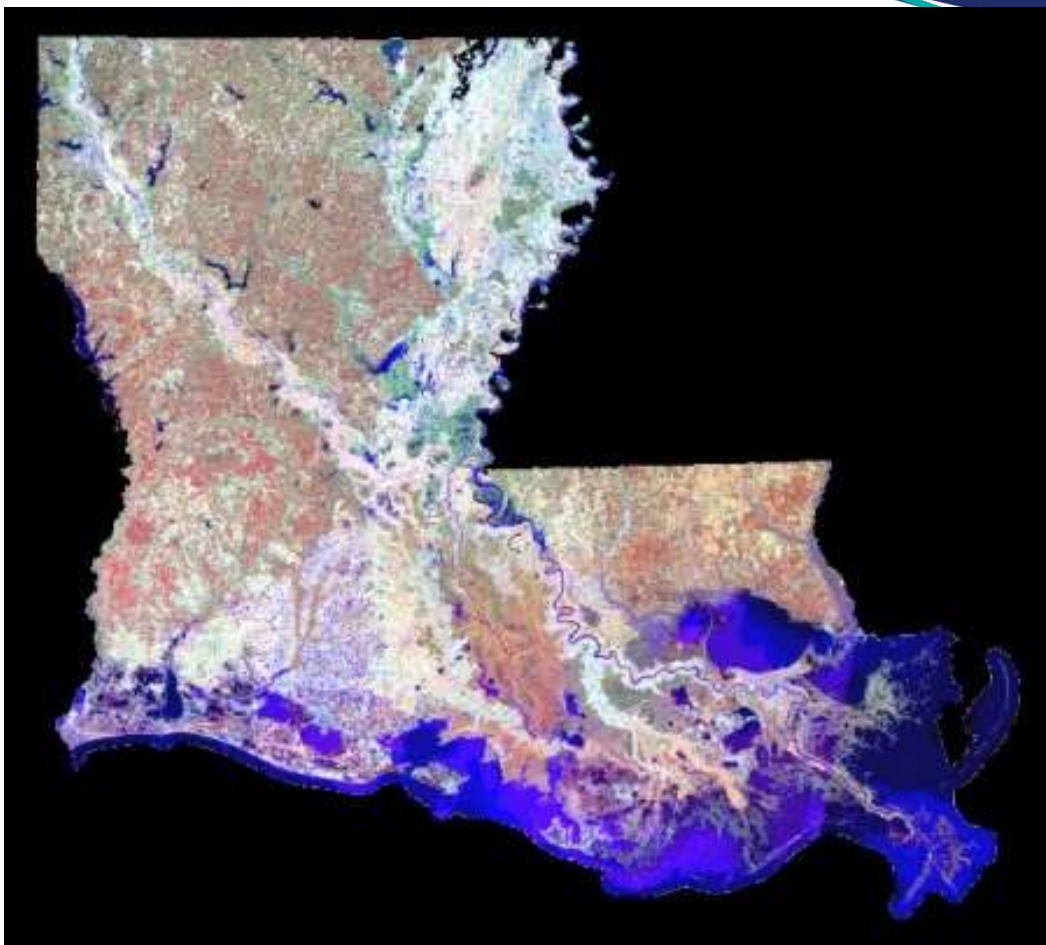
We must build up Multiple Lines  
of Defense:

**NATURAL + MANMADE**

# MULTIPLE LINES OF DEFENSE SYSTEM

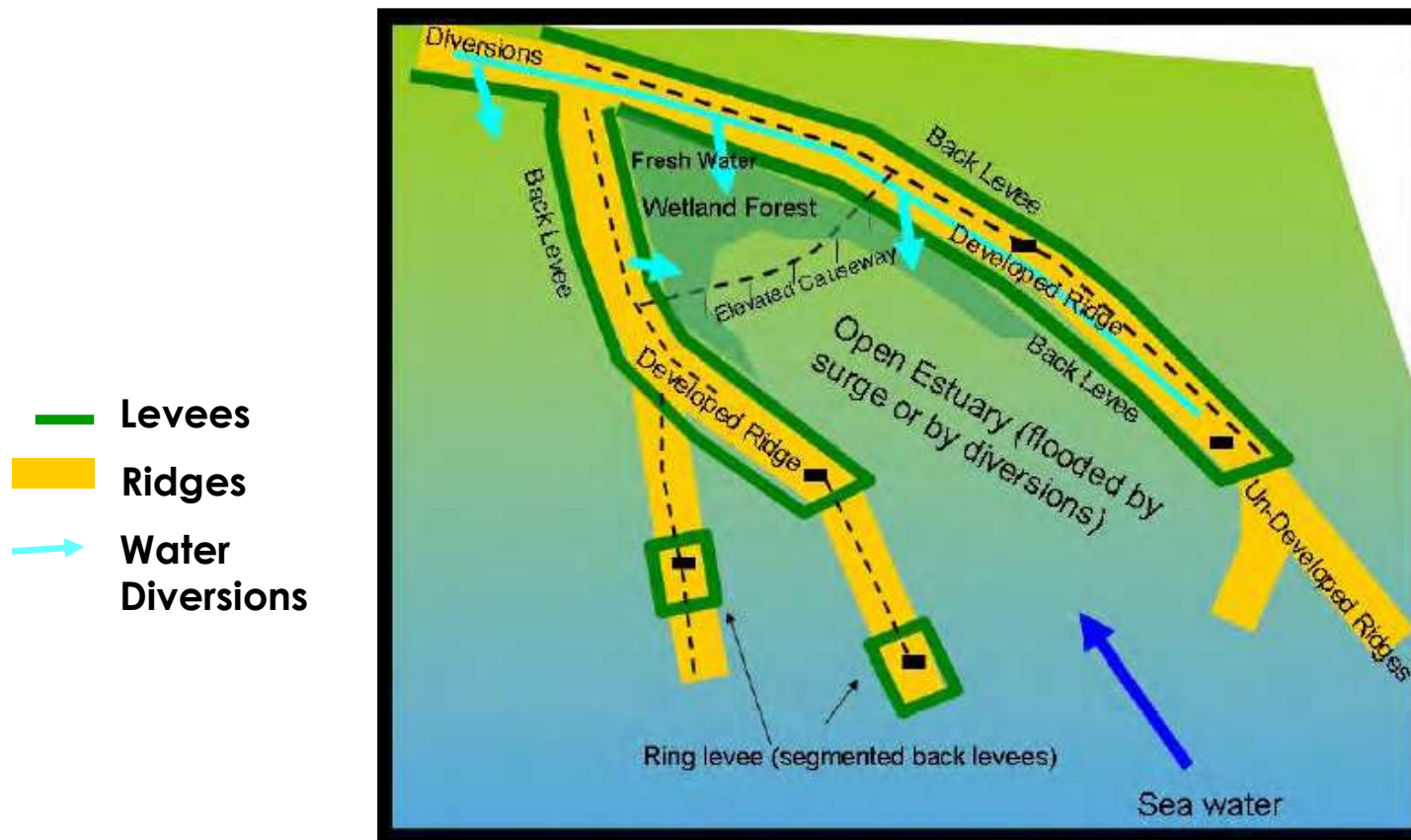
Minimal Residual Risk for Economy or People



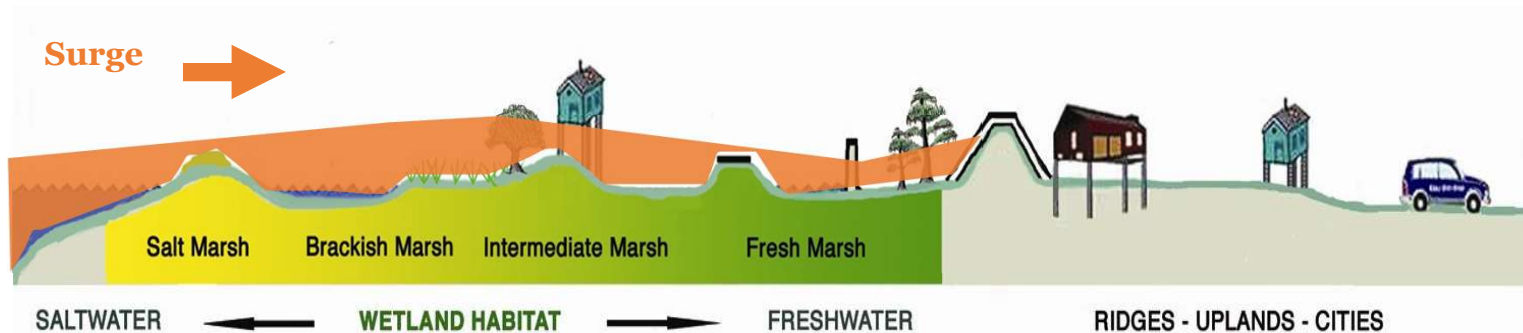
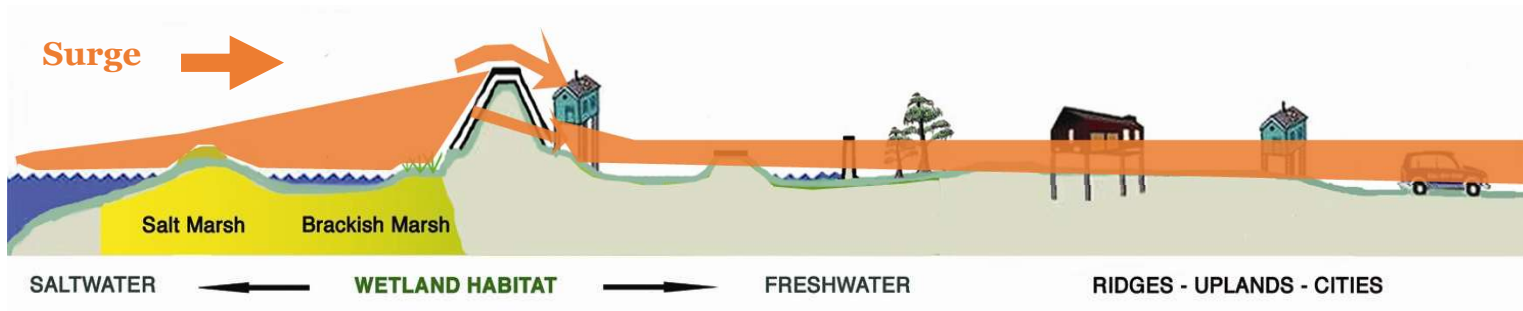


We need our coastal wetlands ...a natural line of defense to absorb the ocean's surge.

**We also need levees! ....to protect us but allow water to feed the marshes and buffer us from storms.**



# But...Levee alignment is critical



## Pontchartrain Coastal Lines of Defense (PCLOD)



In 2002, Pontchartrain Conservancy developed a **Comprehensive Habitat Management Plan (CHMP)**.

The CHMP was developed by a science and engineering committee & reviewed by a second panel of coastal experts

Contains 100+ projects; blueprint for restoration of the habitats in the Pontchartrain Basin.

**PCLOD = 10 habitat restoration projects that would also provide flood protection for the Greater New Orleans area.**

# LA's Comprehensive Master Plan for a Sustainable Coast

- First plan adopted in 2007; updated every 5-7 years
- Since 2007, 135 projects have either been completed or funded for construction.
- The current plan includes seven of PC's 10 projects
- \$50 Billion program over the next 50 years
- Split budget equally between restoration and risk reduction projects
- PC's Science director serves on advisory committee.

# PC's Coastal Program



- PC leads the way in identifying coastal restoration opportunities and issues in the basin
- Partners with Southeastern (!) and other area non-profits on restoration plantings in Caernarvon and Maurepas
- Since 2010, planted over 100,000 swamp trees!**

# OUR PROGRAMS

## Education


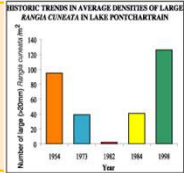






We Educate the Public & Students throughout the Basin

## Water Quality

We test the Water Quality & clean impaired waterways

## Coastal

Multiple Lines of Defense Strategy - recognizes natural and manmade lines of defense combined with wetland habitat restoration to provide hurricane protection as well as coastal restoration.

<b>1989</b>	Lake Pontchartrain Basin Foundation (LPBF) is established as a <b>501(c)(3)</b> – initial funding through EPA via Omnibus Appropriations bill to champion clean up of the Lake	
<b>1990 to 1997</b>	LPBF ensures dredging of the Lake for shells as a road-building material is banned  By 1997, the Lake's food chain is improving & bottom-dwelling clams are recovering	
<b>2006</b>	LPBF leads removal of Lake Pontchartrain from the state & federal Impaired Waterbodies list. It is the <b>LARGEST BODY OF WATER IN THE U.S. TO BE REMOVED</b> (630 sq miles)	
<b>2008</b>	LPBF leads removal of <b>three rivers</b> flowing into the Lake (Tangipahoa, Bogue Falaya, & Tchefuncte Rivers) from the Impaired Waterbodies list	
<b>2009</b>	76-mile Mississippi River Gulf Outlet (MR-GO) is closed due to work of a coalition of organizations; coalition is led by LPBF  Also in 2009, brown pelican was removed from the Endangered Species List & is thriving in the Lake area	 
<b>2013</b>	On Lake's south shore, LPBF opens the New Canal Lighthouse and Museum. To date, 40,000 youth & adult, residents and visitors (from 40 states), learn about the Lake's recovery, stewardship, and coastal restoration	
<b>2020</b>	Lake Pontchartrain Basin Foundation re-brands	

# Our Successes

## What We Do:

- Science-based advocacy to improve quality of life in Louisiana's urban center
- Weekly lake/river testing for quality assurance, all made publicly available
- Leadership role in restoring Louisiana's nationally-significant coastal ecosystem
- More than 100,000 citizens educated each year about stewardship for current and future generations
- More public access to waterfront recreation in underserved areas
- Data sharing with municipal, parish, state & federal government agencies

# How can you help?

- Follow us on Social Media
- Come to our events to celebrate our successes.
- Participate in our Brick Campaign.
- Host an event at the lighthouse
- **Become a Friend of PC**



LIGHTS ON THE LAKE CELEBRATION & BOAT PARADE



BECOME A MEMBER

# New Canal Lighthouse

Come see us!



# Thank you

**Pontchartrain  
Conservancy**



[SCIENCEFOROURCOAST.ORG](http://SCIENCEFOROURCOAST.ORG)