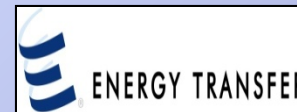


**CAMO Partners:**

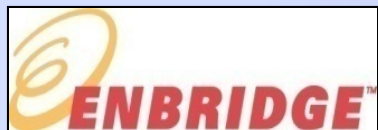


bp



**Ed Landgraf**  
**CAMO Chairman**  
[ed@camogroup.org](mailto:ed@camogroup.org)  
[www.camogroup.org](http://www.camogroup.org)  
Ph. (985) 209 4753

*Louisiana*



# C.A.M.O. - Coastal, And Marine Operators

## Joint Industry Initiative

- **Who is CAMO? – Formed in 2009 as an inclusive pipeline stakeholder group with over 20 pipeline companies participating. We encourage non-industry groups with marine pipeline safety interest to join our non- profit group. [www.camogroup.org](http://www.camogroup.org)**
- **Mission – Ensure Public Safety and Environmental Protection by preventing pipeline spills and releases in ALL marine areas.**
- **Action - Design and Support “Innovative Drivers” and education on that will enhance the protection of pipeline infrastructure through public, industry, NGO, government and agency collaboration, while demonstrating continuous improvement.**
- **Goal – “0 Marine Incidents” Implement effective marine solutions that reduce 3<sup>rd</sup> party damage and enhance safety, asset integrity, environmental protection and preserve our right to operate.**



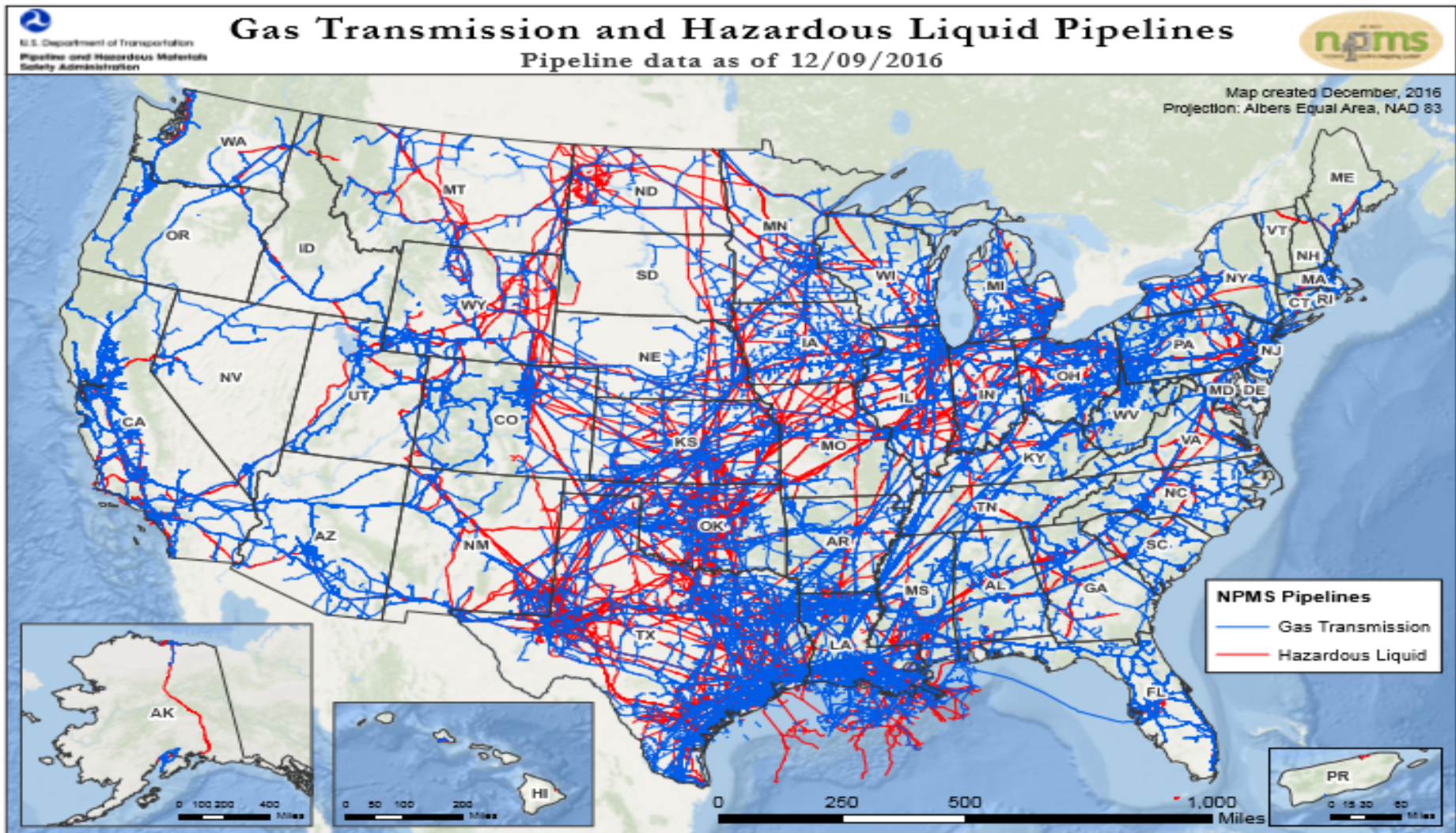
Defining USA Boundaries? Pipelines run through many marine environments via right of ways.

# US Gulf Coast Energy Statistics:

## (Most of which is transported via marine and coastal pipelines)

- Provides over 40% of all energy consumed in the US
- LA. and TX. are home to four US Strategic Petroleum Reserve underground storage facilities
- MS. LA. and TX. Combined refining capacity is over 7.5 million barrels a day, which is 43% of the total US market share
- Home to Louisiana Offshore Oil Port (LOOP) with a capacity of transporting over 1 million barrels of imported crude oil a day
- Henry Hub, located near Erath, La. has a nexus of 13 natural gas pipeline systems that carry approximately 49 percent of US wellhead production to US markets
- Over 2.6 million barrels of crude oil traverses the Gulf Coast each day through pipelines, much from the over 4000 platforms in the Gulf of Mexico
- Over \$6 billion of federal revenue is generated each year from the Gulf Coast OCS oil and gas production, this is Second only to the IRS in total US Gov't Revenue

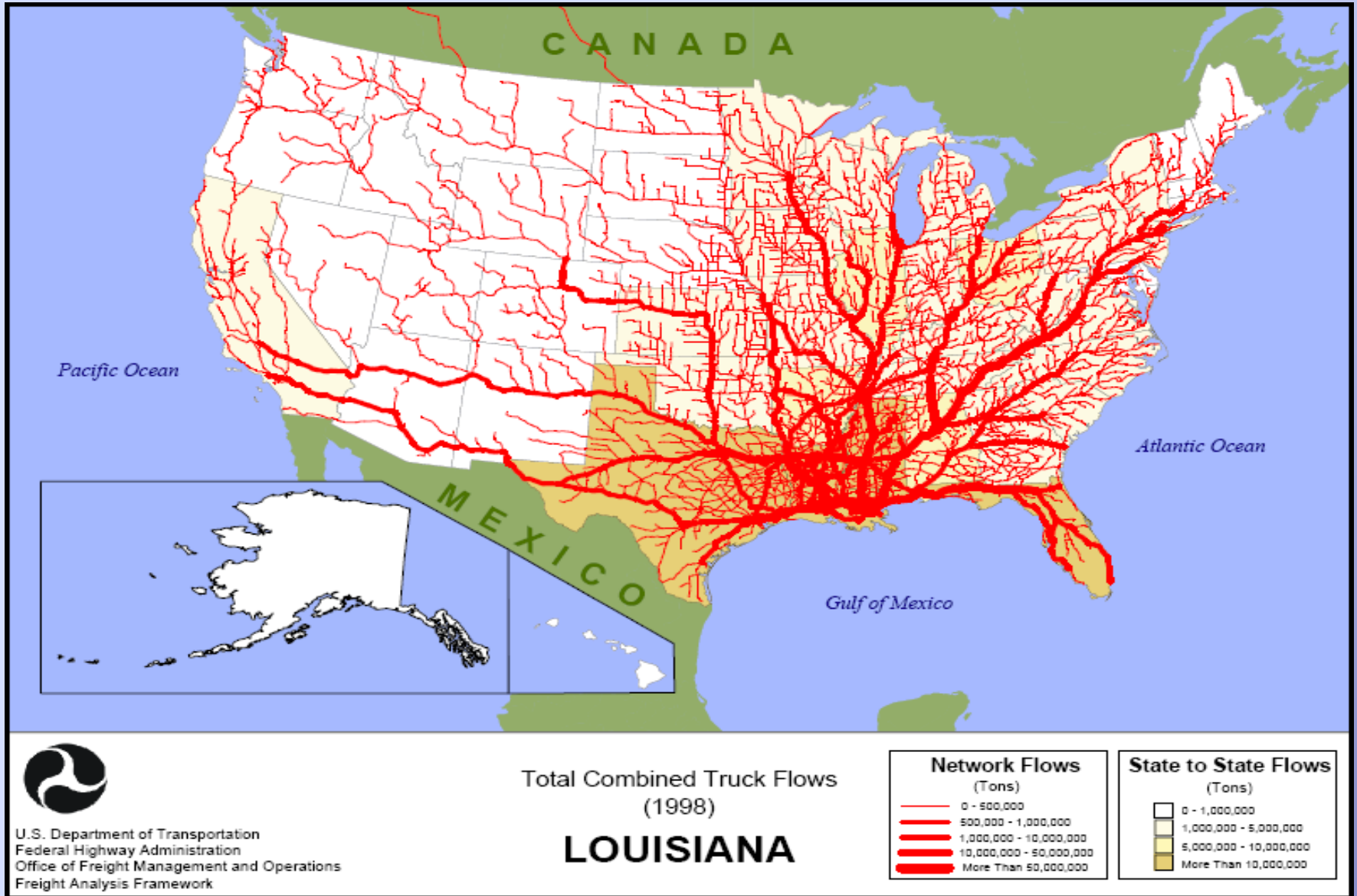
# Protecting US Pipeline Infrastructure from downtime, releases and spills is critical to our Economic and Energy Security – “In Marine and Coastal Areas”



# US Marine Ports/ Inlets may have a greater USA Impact on Ecological Resources?



# US Marine Ports/ Inlets may have a greater USA Impact on Ecological Resources?



## USA Coastal Waters? - How do you define inlets vs. rivers...

**Example: USA's on major river inlets needs to be considered – A CAMO member Port of South La. is the largest tonnage port in the Northern Hemisphere, has 72 pipelines and over 4000 vessels/ barges a day...**



Barges moored over →  
Pipelines can cause spills!

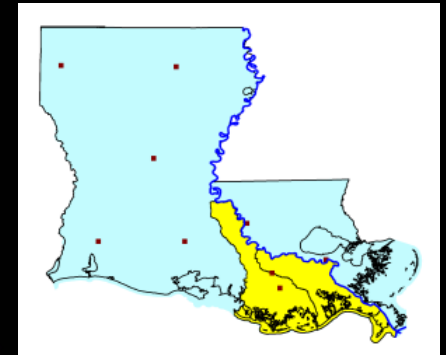


# CAMO and Nat. Estuary Program are Partners in Pipeline Safety (Estuary Received a Tag Grant from PHMSA)

## Barataria-Terrebonne National Estuary

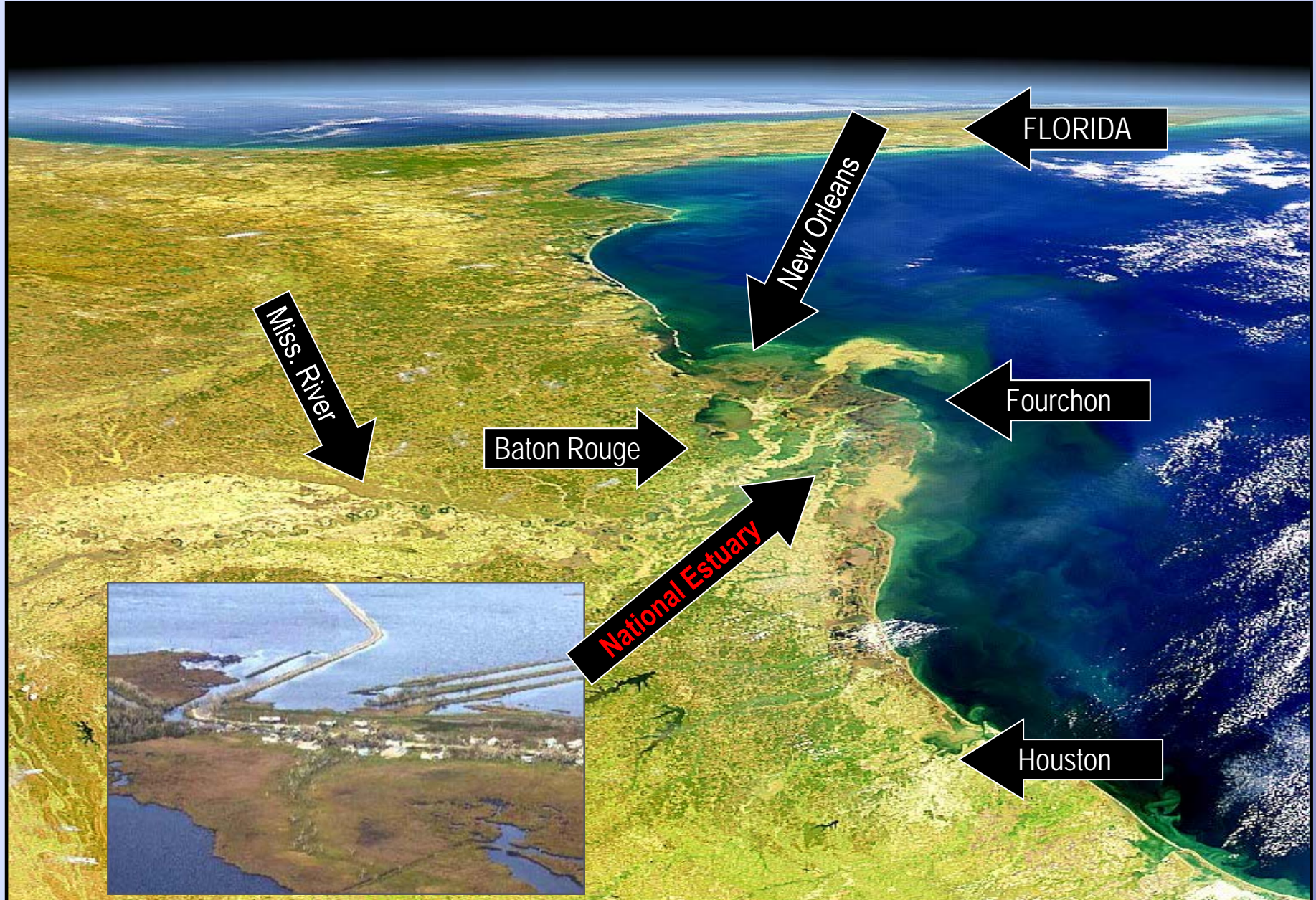
One of 28 National Estuary Programs  
throughout the United States and its territories

It possibly has the largest concentration of  
pipelines in the US



As part of the Mississippi Delta, which is the 7<sup>th</sup> largest on  
Earth, it equals 40% of the Nations Wetlands

# USAs - Gulf Coast Overview



**Barrier Islands  
and Beaches, a  
USA may not be  
needed (these  
move naturally)**



**Note: Pipelines  
are usually  
bored underneath**

# Coastal Pipeline Corridors – USAs?

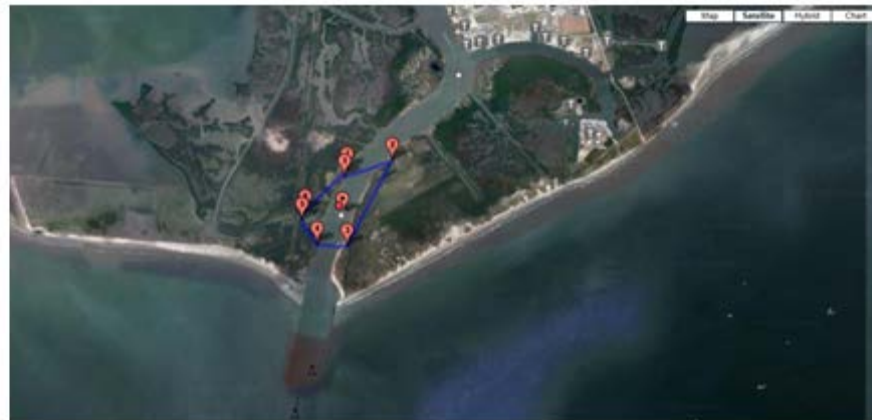
Pipeline Corridor 1 SW Channel - Port Fourchon



Pipeline Corridor 2 Bayou LaFourche North

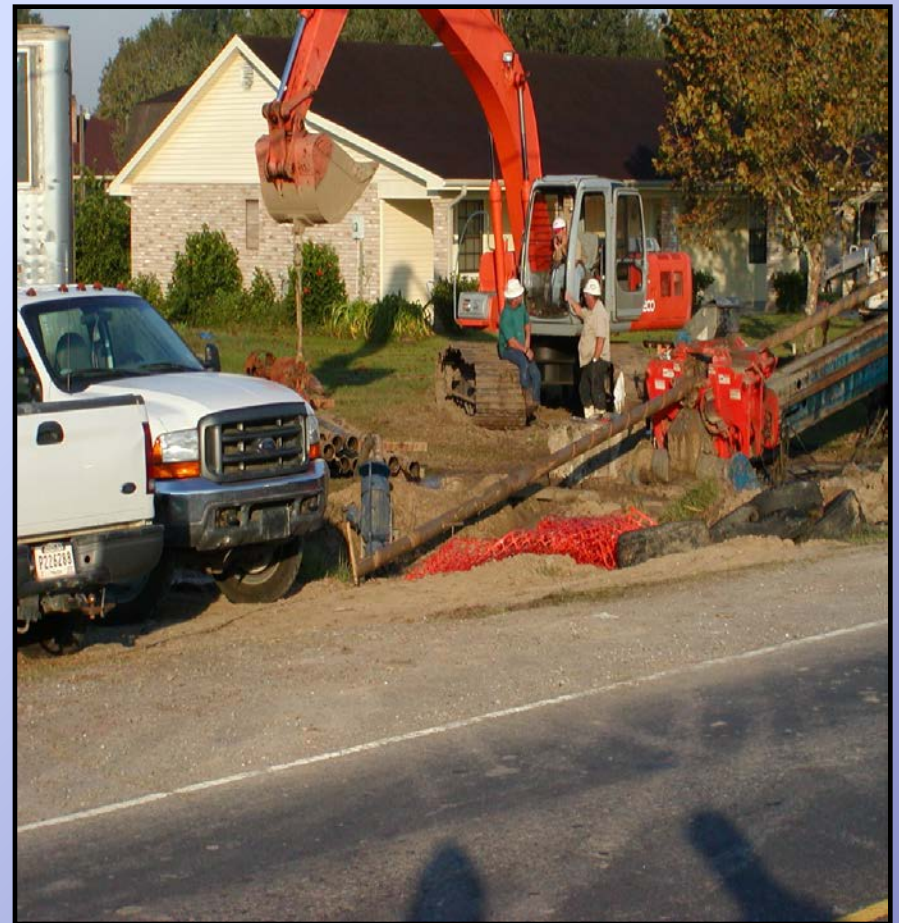


Pipeline Corridor 3 – Southwest Mid Channel - Port Fourchon



**General Marine Pipeline Safety is not Equally Understood  
Unknown and 3<sup>rd</sup> party damage is a major source of the  
Pipeline Industries largest spills.**

**Marine                      or                      On Land**



# Marine Pipeline Fatalities and Incidents DO Happen! So, what's is the Causes...



## Interactions between Marine Vessels and Pipelines (over 20 yrs.)

Source: NTSB, Coast Guard and PHMSA

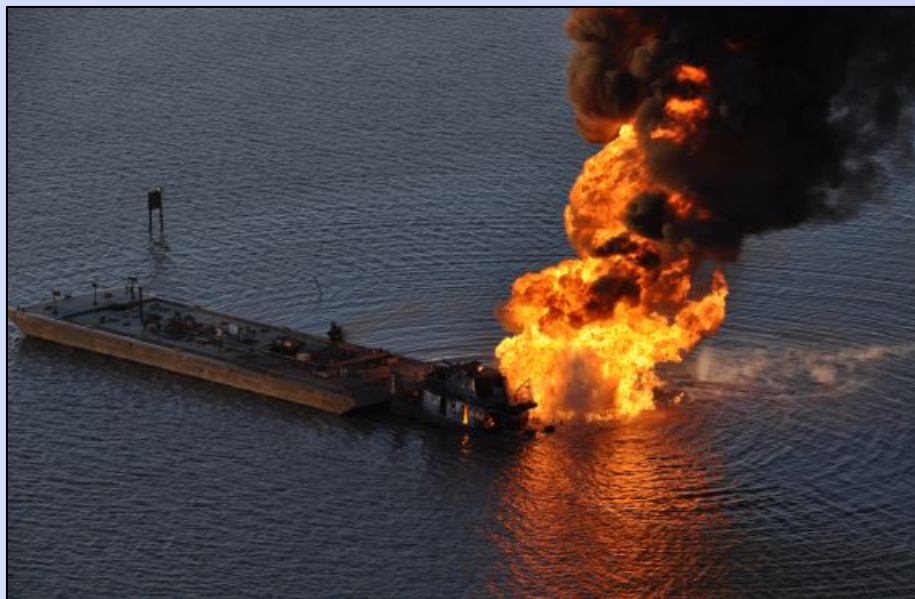
Pipeline Strikes Reported 118

Fatalities 25

Personnel Injuries 17

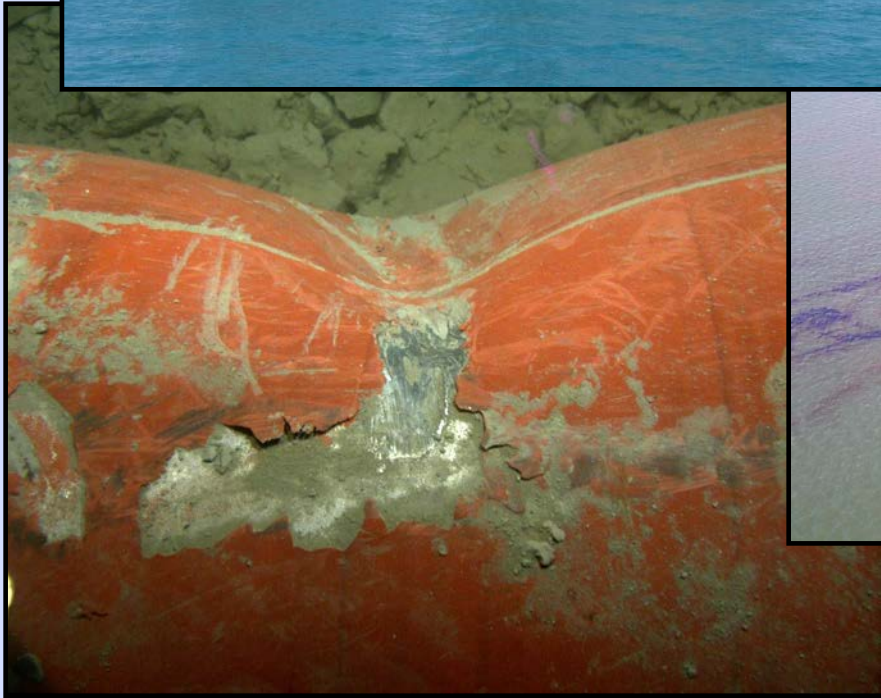
Environmental Impact - Pipeline Spills  
100,000 bbls

**Spills in Costal/ Marine  
Environments can  
average over \$10,000  
a bbl. just to clean up**



# Wheel wash Example: Vessel Prop Hits a Pipeline Causing Rupture





**3<sup>rd</sup> Party Vessel interactions occur offshore, coastal and near shore –  
Yet Marine Damage Prevention Guidelines are lacking**



# Dredging Activity and Damages (Occur in many "USA" areas)



## Do Dredge's and Pipelines impact each other?

(CAMO Study shows some type of damage or strike - averages 1 per year)

### [Dredger strikes subsea gas pipeline in Gulf of Mexico, El Paso ...](#)

[gcaptain.com/dredger-strikes-subsea-pipeline/](http://gcaptain.com/dredger-strikes-subsea-pipeline/) ▼

Apr 1, 2011 - Incident Summary: At 2030 on 30 Mar, while conducting dredging operations

### [Dredging ship cracks natural gas pipe in Delaware River](#)

[www.dailylocal.com/article/DL/20140807/NEWS/140809829](http://www.dailylocal.com/article/DL/20140807/NEWS/140809829) ▼

Aug 7, 2014 - The breach occurred at about 9:15 p.m. when a dredging vessel contracted by the U.S. Army Corps of Engineers struck an 8-inch pipeline near ...

### [Coast Guard responds after dredge strikes pipeline in Louisiana ...](#)

[coastguardnews.com](http://coastguardnews.com) › Marine Environmental Protection ▼

Sep 5, 2016 - NEW ORLEANS – The Coast Guard and other agencies are responding to an oil discharge near Bay Long, Louisiana, Monday. Watchstanders ...

### [<sup>\[PDF\]</sup> Natural Gas Pipeline Rupture and Fire During Dredging of Tiger Pas...](#)

[pstrust.org/docs/ntsb\\_doc19.pdf](http://pstrust.org/docs/ntsb_doc19.pdf) ▼

Oct 23, 1996 - The spud struck and ruptured a 12-inch-diameter submerged ... gas released from the pipeline enveloped the stern of the dredge and an ...

### [Pipeline Fire - CNN iReport](#)

[ireport.cnn.com/docs/DOC-413532](http://ireport.cnn.com/docs/DOC-413532)

Dredge hit a natural gas pipeline off  
apflood | Posted February 26, 2010 | I

# National Estuary Spill – Federal Coastal Restoration Project Sept. 2016



## 200 birds oiled in Bay Long spill as cleanup continues

Marsh buggy rebuilding Chenier Ronquille Island as part of BP spill response cut pipeline on Monday, causing new 5,300-gallon oil spill

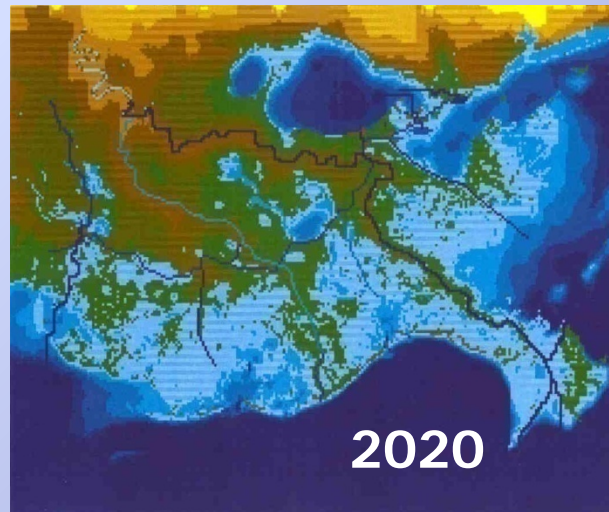
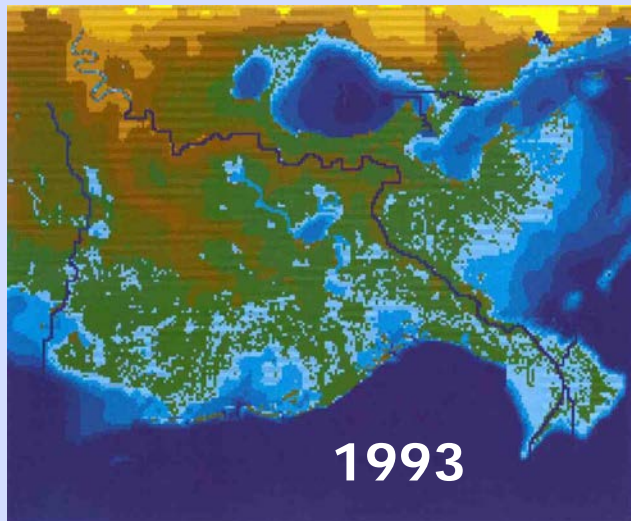
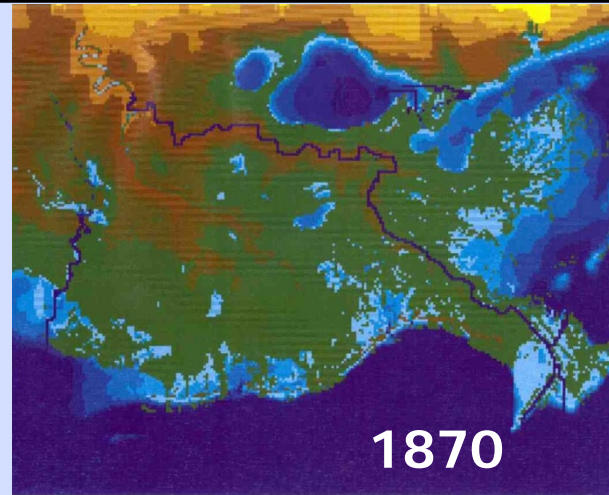
### Bay Long oil leak caused by federal Coastal Restoration Contractor

It's one of those ironies that Louisiana may have to get used to: the 5,250-gallon spill of crude oil discovered Monday in Bay Long, part of Barataria Bay, was caused by a contractor working on a project aimed at restoring the effects of the BP oil spill, federal officials confirmed Tuesday (Sept. 6).

An excavating marsh buggy operated by Great Lakes Dredge & Dock Co. accidentally cut through a pipeline, releasing the oil, while rebuilding Chenier Ronquille Island on the edge of Bay Long, part of the southern edge of Barataria Bay.



# USA Example in a Coastal Areas: LAND LOSS impacts on Pipeline Integrity?



- National Estuary (a CAMO Partner) image
- Estimated 8,000 miles of pipeline crosses this area
- Marking Pipelines in coastal and marine areas is a challenge
- USAs can't all be defined the same way
- Will defining USAs prevent spills?

**Coastal Estuaries:  
Hurricanes, Land Loss  
and Coastal Erosion  
Effects on Pipelines...  
and USAs**



**Shallows pipelines which  
were previously buried -  
Leaving them open to 3<sup>rd</sup>  
party damage...**

**3 Incidents in March 2013 involving vessels and marine pipelines infrastructure inside potential Ecological USA...**

**Land Loss over the pipeline was a factor in this Fatality.**



# CAMO's Proactive – Marine Pipeline Safety AIS Active Monitoring System – from PHMSA Grant.

The screenshot displays the 'portvision' web interface. At the top, there is a search bar with 'ALL' selected in the 'Region' dropdown. The current user is identified as 'my\_account' from 'portvision' in the 'home region: Fourchon, Louisiana'. The main map area shows a satellite view of a river with a red line indicating an 'Active Submerged Pipeline'. A red dashed line with arrowheads shows the 'Real Time - Tug Boat and Barge track just before the pipeline strike, fire and fatality occurred'. A red circle highlights a vessel on the track. The right sidebar shows details for 'SHANON E SETTOON', a tug with call sign W004758, IMO: 1239, and a last report on 2013-03-12. Below this are sections for 'Actions' and 'Events' with a list of port passes and arrivals.

**portvision**

Search: Search Here | Region: ALL

Current User: my\_account | portvision | home region: Fourchon, Louisiana

Map | Satellite | Chart

**SHANON E SETTOON**

**Details**

Type:	Tug
Call Sign:	W004758
IMO:	1239
Flag:	United States
Last Report:	218 days 21 hours ago 2013-03-12 17:37:22 CDT
Heading:	Unknown
Speed:	0 knots
Location:	Lat: 29.63, Lng: -90.17

AIS | USCG | OES

**Actions**

- View Position History
- View Event History
- Hide Vessel Track
- Start Distance Calculator

**Events**

Passed GIWW MM 20 W	2013-03-12 16:33 CDT
Passed GIWW MM 30 W	2013-03-12 05:48 CDT
Passed GIWW MM 40 W	2013-03-12 03:23 CDT
Arrived at Port: New Orleans, Louisiana	2013-03-12 03:20 CDT
Passed GIWW MM 50 W	2013-03-12 02:09 CDT
Departed Port: Houma, Louisiana	2013-03-12 02:06 CDT

Active Submerged Pipeline

Real Time - Tug Boat and Barge track just before the pipeline strike, fire and fatality occurred

Advance 0.5 minute(s)

2013-03-12 17:37 CDT

# On Land or Marine?

Many **LAKES, RIVERS, BAYS, GULF and OCEAN** stakeholders don't understand **811 and damage prevention is needed in all areas!**



**Know what's below.  
Call before you dig.**

**USAs – will 811 apply? Not all state laws require 811 in “water” areas.**



# CAMO Guidelines for Underwater PL Damage Prevention

**CAMO proactively educates stakeholders through Mass Mail, F2F Engagements, Awareness Material and many other means...**

State Waters: including Rivers, Lakes, Bayous and Bays

- Activities: Dredging, Spud Barges, Jack-up boats, Tug Boats and Barges, Heavy Anchoring, Seafloor contact of commercial fishing gear, Large Vessels, Site Clearance, Pile Driving, Boring, Wheel Washing, Installation and Removal of marine structures etc.
- Inland or coastal waters **activity within a 250 ft. of a pipeline needs to be reported** and planned directly with the pipeline company to get a safe to work acknowledgment or crossing agreement

Gulf of Mexico: Federal waters outside of state boundaries

- Activity: anchoring of all types, jack-up boats, spud and lay barges, ships, site clearance, seafloor exploration activities, seafloor contact of commercial fishing gear, platform installations, abandonments etc.
- Any offshore **activity within 1500 ft. of a pipeline needs to be reported** and planned at least 1 weeks prior, this will lessen your liability if an incident occurs

**NOTE: Electric, Fiber-Optic, Water, Phone, Cable, Gas lines, also run underwater and the same guidelines to prevent marine damage apply**

# USA Ecological, Safety and Economic Evaluation Considerations:

- Risk rank questions and discussion examples:
  - Number of PLs in the area and est. volume transported (ID the product: Crude, NGLs, Refined products?) "some are more hazardous than others"
  - Many protective measures are in place to prevent "Marine" spills (AIS monitoring, PA programs, line patrol, SCADA?)
  - Age of PL infrastructure, history of spills (newer is always better)
  - Evaluate amount of "Marine" activity in the region that could cause a spill (jackup boats, barges, anchors, pile driving, dredging and other 3rd party damage potentials)
  - Potential Environmental Impacts (IUCN Red list, Endangered Species, ID scenic waterways, highly populated and overlay drinking water supplies for beaches, rivers, lakes and coastal areas)
  - Response capabilities (can waters be easily blocked/ isolated/ boomed off if a spill occurs. In a Remote area? away from OSROs/ Emer Rspndrs)

# USA Ecological, Safety and Economic Evaluation Considerations:

(Continued)

- Marine Spill impacts include fisheries closures? (Shut in of shipping lanes, harbors, ports, lakes, beaches, rivers or public access and energy supplies) ie. Oysters/ Clams – a 3" oysters filters over 25 gal/ water a day
- Public/ Ecological Safety Risk? (fire, fumes, explosive cloud) "where humans can be injured by a release along with Flora and Fauna

## USA and Marine Pipeline Awareness:

- Define ecological USA boundaries and buffer zones where its clear to both PL companies, regulators and stakeholders.
- Pipeline regulatory agencies and resources for Marine, need to be better defined (US Coast Guard, BSEE, PHMSA, State Wildlife and Fisheries)
- Define Coastal USAs by natural Tidal flows? Coastal areas, lakes, rivers and inlets, should be designated by each state



# Why?



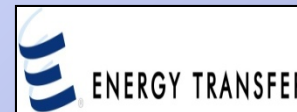
- To safely protect the community and the environment.
- **Ecology and Pipelines need “marine coastal lands” for protection and sustainability**
- More collaboration is needed!
- Enhance Marine/ Coastal Pipeline protection measures
- Protect the US oil and gas Energy Supplies and Economy



**CAMO Partners:**



bp



**Ed Landgraf**  
**CAMO Chairman**  
[ed@camogroup.org](mailto:ed@camogroup.org)  
[www.camogroup.org](http://www.camogroup.org)  
Ph. (985) 209 4753

*Louisiana*

