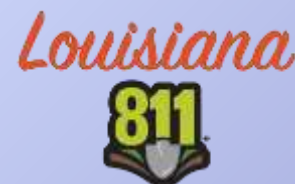
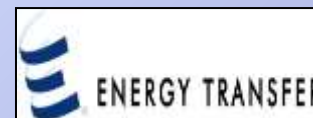


CAMO Members/ Partners:



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

Joint Pipeline 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 safety and environmental interest to join our initiative.**
- **Mission – Ensure Public/ Mariner Safety and Env. Protection by preventing pipeline spills and releases in ALL marine areas.**
- **Our Actions - Design and Support “Innovative Drivers” and provide awareness which enhance the protection of pipeline infrastructure through marine stakeholder, public, industry, NGO and agency collaboration, while demonstrating continuous improvement.**
- **Goal – “0 Marine Incidents” by implementing effective marine solutions to reduce 3rd party damage, enhance safety, asset integrity, environmental protection and preserve our right to operate.**

**General Marine Pipeline Safety is not Equally Understood.
Unknown and 3rd party damage is a major source of the
Pipeline Industry's 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 Washing Vessel Damages 16" Nat. Gas PL



**Worker Safety and
Releases in marine
environments
can be very serious**

**Voyage Plans,
plotting routes
and marine staging areas
are very important**



Raising Awareness and with fishermen and boaters is a key CAMO Initiative

One dead, two injured, after boating accident near Cocodrie

Updated: Sunday, July 23rd 2017, 11:46 pm CDT

Written by: Kenny Kuhn, News Content Specialist

CONNECT



Jacob E. Fulmer II

NEW ORLEANS (WVUE) - A boating accident in Terrebonne parish leaves a one fisherman dead and two injured.

According to a Terrebonne Parish sheriff's office report, it happened Friday, July 21, shortly after 11:00 p.m. in Lake Baree near Cocodrie, La.

Authorities say a captain and six fishermen were on a charter fishing trip when their 25-foot bay boat struck an underwater well head. Three of the men were ejected from the boat on impact. One of the three ejected, died. Deputies identified him as 36-year-old Jacob E. Fulmer II from Ector Texas.

The other two men were rescued and treated for minor injuries.

The boat accident is now being investigated by the U.S. Coast Guard.

CAMO Case Study: Dredging Activity and Damages



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/ ▼

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 ▼

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 › 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 ...

^[PDF] Natural Gas Pipeline Rupture and Fire During Dredging of Tiger Pas...

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

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

Dredger Hits Natural Gas Pipeline and Catches Fire

<https://www.maritime-executive.com/article/dredger-hits-natural...>

By MarEx 2018-04-18 15:34:00 [Brief] On Tuesday evening, the cutter suction dredger Jonathan King Boyd hit a gas pipeline during dredging operations in Matagorda Bay, Texas, sparking a fire.

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 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.



Waterways and Rivers marine/ dredging activity... Thoughts?

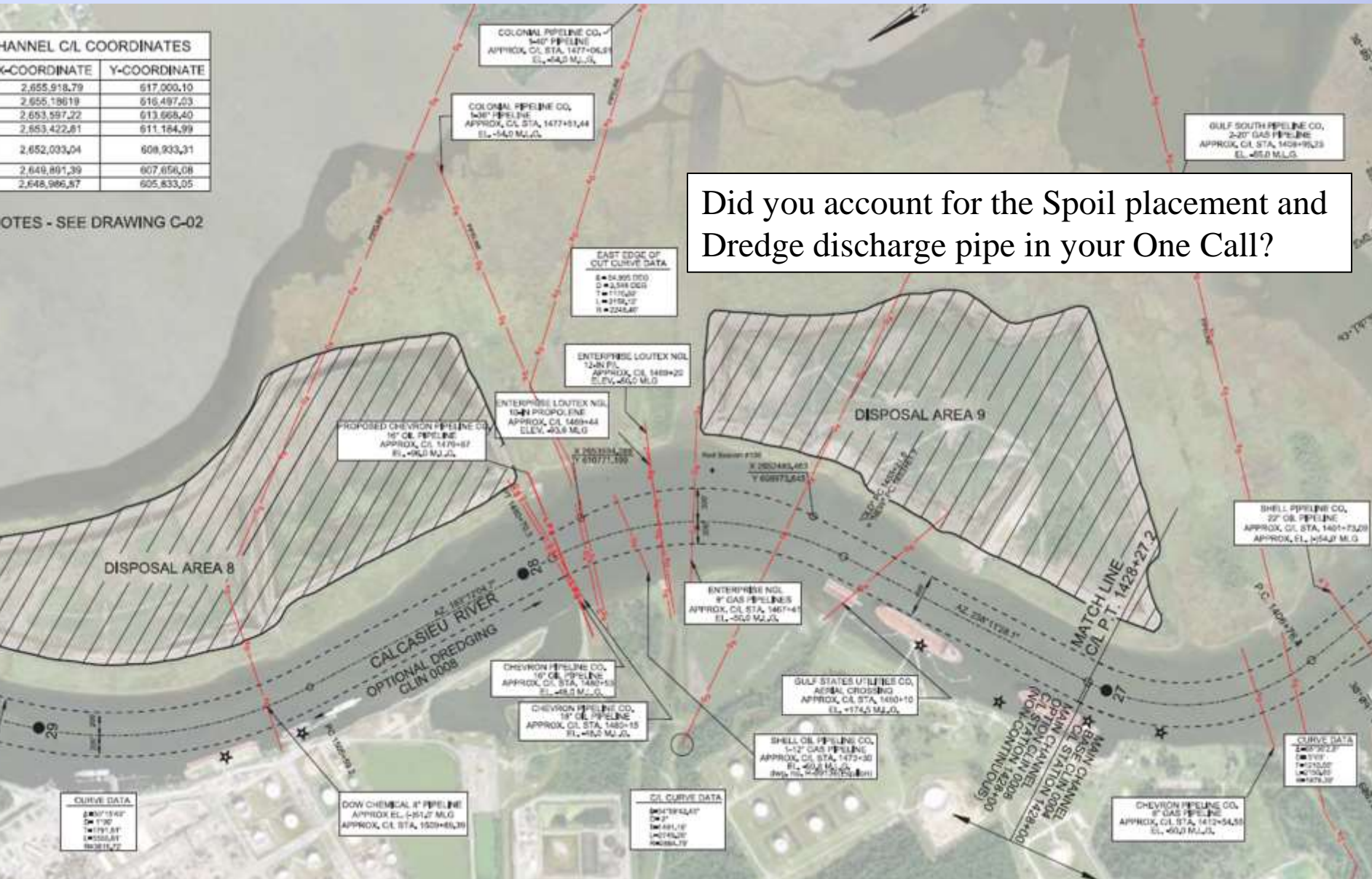
- Are “Do Not Anchor or Dredge” signs effective? (night, fog, alignment issues?)
- Do you have the proper stakeholders ID'd in your work plan?
- Example - Miss. River if shut down - \$340MM a day in Economic Impact
- CAMO issues MSIBs through US Coast guard



Barges moored over ➡
Pipelines in front of Sign

Dredger Reported Activity to CAMO for Help

X-COORDINATE	Y-COORDINATE
--------------	--------------

NOTES - SEE DRAWING C-02

South Louisiana Examples from the same waterway...

- Span of 5 years there were 2 dredge company projects where pipelines were hit both with oil spills
- Barge strikes pipeline – killing the captain



CAMO - AIS monitoring of the event

portvision

Search: Search Here | Region: ALL | Enter Vessel, Call Sign, IMO number, Terminal, or POI

My Alerts | My Fleets | My Terminal/POI Lists | Reports and Analytics | Dashboard | Preferences | Welcome | User Guide

Current User: myaccount | Logout | portvision | home region: Fourchon, Louisiana

SHANON E SETTOON

Details

Type:	Tug
Call Sign:	WDD4755
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 | CCR

Actions

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

Events

Passed GRWW MM 20 W	2013-03-12 16:23 CDT
Passed GRWW MM 30 W	2013-03-12 05:48 CDT
Passed GRWW MM 40 W	2013-03-12 03:23 CDT
Arrived at Port: New Orleans, Louisiana	2013-03-12 03:29 CDT
Passed GRWW MM 50 W	2013-03-12 02:09 CDT
Departed Port: Houma, Louisiana	2013-03-12 02:06 CDT

Playback

Map | Satellite | Chart

Google | 100 m | 200 ft

Advance 0.5 minute(s) | 2013-03-12 17:37 CDT

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

Active Submerged Pipeline

On Land or Marine?

Many **LAKES, RIVERS, BAYS, Gulf and Ocean** stakeholders don't understand **811 and call before you dig laws.**



Note: Not all state laws require 811 in “marine” areas.

National Estuary Program and Coastal Conservation Assn. partners with CAMO “Coastal and Marine Operators”



Current Public Awareness and Damage Prevention Highlights –

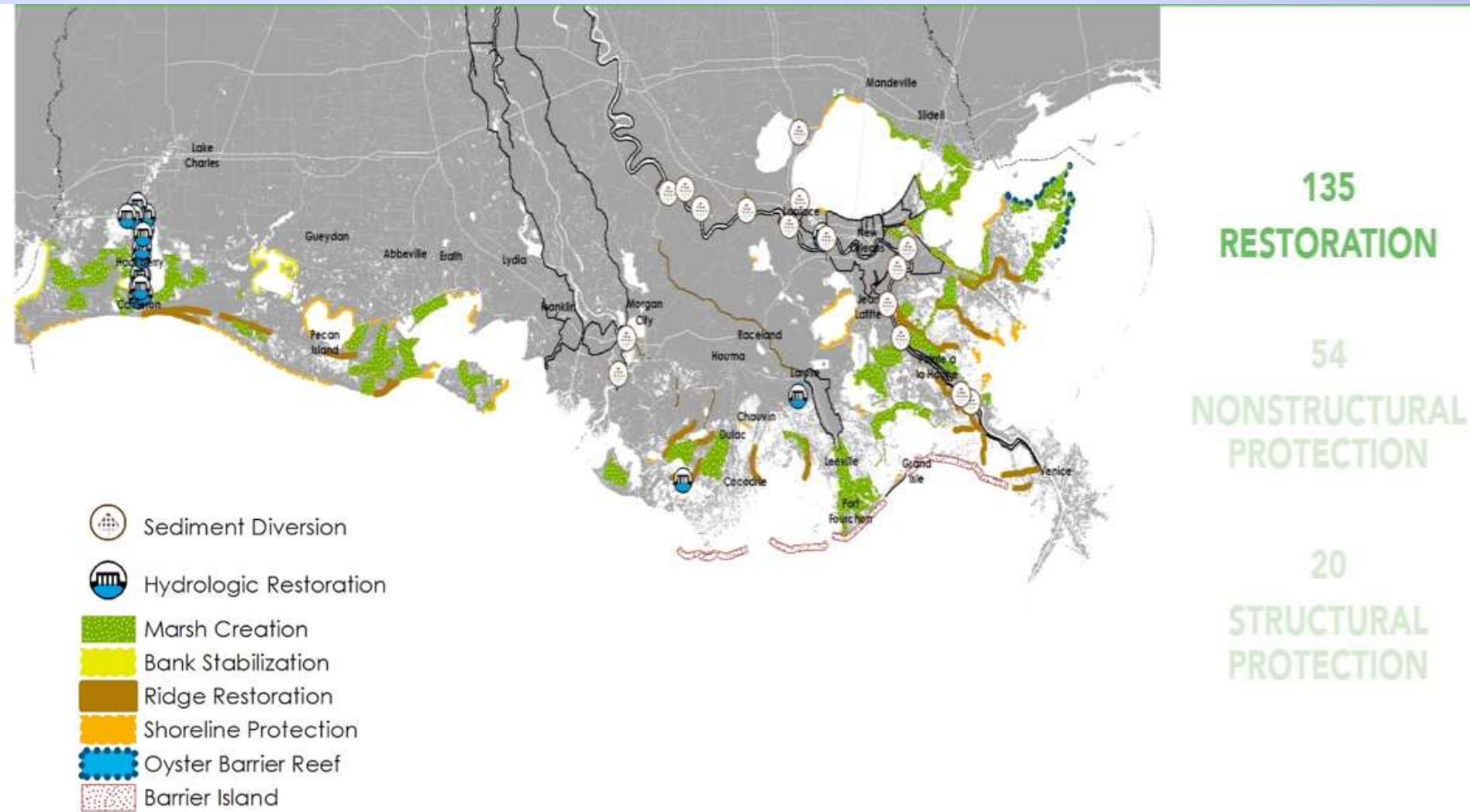
- **Designing PSA for Print, TV and Web education, Mass Mail to over 5000 fishermen and stakeholders, partner with Sea Grant, partner with CCA and BTNEP to include education in their outreach program, participate in face to face meetings and speak at conferences, exhibits at venues etc...**
- **Oct 2018 – CAMO will host its annual Marine Stakeholder Liaison Meeting**



CAMO - Evaluation of Marine Pipeline Safety Program

- **Do you have submerged assets? No Really!!!!**
- **Do you have a risk of Marine Damages in your area?**
- **If so, what is being done about it?**
- **How is Marine Damage Prevention covered in your program?**
- **Do you have a program to target marine stakeholders?**
- **Does your State's law require "Marine One Calls"?**
- **Are your right of way representatives trained to handle a marine 811 call?**
- **Are your marine assets listed with a one call center?**

Over \$150 Billion of Restoration Projects Considered



Its all about the WATER Dummy!!!!

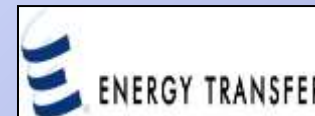
Heard of these?

- **Keystone Pipeline**
- **Dakota Access Pipeline**
- **Bayou Bridge Pipeline**
- **Great Lakes – Existing Pipelines**
- **Mariner East Pipeline**
- **and others...**



**Join CAMO and help us protect
Submerged Pipelines and Utilities!**

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