WORKING SAFELY NEAR UNDERWATER PIPELINES

Recommended Best Practices Guide & Checklist for Damage Prevention

CAMO — Coastal and Marine Operators

LPBF — Save Our Lake, Save Our Coast — Lake Pontchartrain Basin Foundation

Introduction & Disclaimer

This *recommended best practices guide* ("guide") promotes safe dredging and marine construction operations near underwater pipelines. It does not replace or override any individual company's health, safety, and environmental protocols. This guide was developed in consultation with professionals working in marine construction and pipeline industries.

All users of this guide should first consult authorized information sources including, but not limited to, the following: (i) employer practices, (ii) industry practices, (iii) federal and state statutes and regulations, and (iv) local laws, regulations and ordinances. This guide is not a substitute for any employer or industry practice, nor local, state or federal law, regulation or ordinance.

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Lake Pontchartrain Basin Foundation

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

www.saveourlake.org

Coastal and Marine Operators Group

CAMO is an industry initiative engaging marine vessel operators to promote public safety.

www.camogroup.org

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Working Safely Near Underwater Pipelines: Recommended Best Practices Guide and Checklist for Damage Prevention

Your job involves decisions that may directly or indirectly impact miles of underwater oil, gas, or chemical pipelines. Within inland waterways such as rivers, bays, lakes, coastal areas and offshore areas, pipelines co-exist with vessel and boat activity of all kinds. With more pipelines being installed every day, combined with increasing dredging and marine construction activity in the same waters, the chance of a marine vessel contacting an underwater pipeline continues to grow. Accidental interactions and incidents have caused spills, outages, gas releases, injuries, and loss of human life.

This is a recommended best practices guide ("guide") for the marine construction and pipeline industries. It addresses pipeline safety, damage prevention, and emergency response in the marine environment. All mariners and pipeline personnel engaged in marine construction, pipeline safety, or related activities should consider this guide a resource and keep it readily available.

Section 1:
Understanding Underwater Pipelines

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Section 1: Understanding Underwater Pipelines

This section provides help for planning, identifying, and avoiding underwater pipelines. It is for marine construction personnel, including (assistant) project engineers, (assistant) project managers, superintendents, captains, and operators. Recommended communications with pipeline representatives and emergency contacts are listed. These recommendations are not all-inclusive. There can always be exceptions to a specific activity. Communicating concerns and mitigating risk early and often with all parties during project planning and throughout implementation are crucial to project success. Take every opportunity to ask the pipeline company basic information about each underwater pipeline in your project area and incorporate the following 10 elements into your planning, project scope, pipeline avoidance, and emergency response plans.

1.1 Company Name & 24/7 Emergency Contact Number

Most pipeline companies have a control center that monitors their pipelines 24/7 with an 800 toll-free number for emergency calls. This number should be on hand at all times and called during pipeline emergencies, such as a pipeline leak or strike. In many cases the control center is able to shut down the pipeline remotely. If a company does not have an 800 toll-free number, find the name and phone number of the appropriate contact person.

1.2 Company Representative Name and Contact Number

Often called a "Right-of-Way Technician" or "Pipeline Technician," this individual is responsible for marking pipelines or providing information on their exact locations.

1.3 Pipeline Product

It is important to know the product in each pipeline. Products may vary in volatility and have different characteristics when released. The product must be clearly stated in your contingency plans to minimize safety and environmental risks if a release occurs.

1.4 Pipelines vs. Flow or Production Lines

Generally, "Pipelines" are larger diameter, long-distance, higher-pressure lines and are subject to federal regulations. "Flow Lines" or "Production Lines" are generally smaller, short-distance, or lower-pressure lines, and may be subject to state regulations. These lines may contain oil, gas, water or other substances.

1.5 Pipeline Diameter

Pipelines can range in size from 6 inches to 48 inches in diameter. Flow lines or production lines are usually smaller, ranging from 2 inches to 6 inches in diameter.

1.6 Pipeline Pressure Range

Understanding the general operating pressure of a pipeline in your project area could help establish the level of risk and precautions. Pipeline pressure generally ranges from 300 – 1,500 psi. Even if a pipeline rupture occurs and the pipeline is shutdown, it can take several hours for the pressure to bleed down to a safe level.

1.7 Pipeline Depth

Pipeline depths of cover under the water bottom or mud line are generally a minimum of 3 feet when installed and can have more than 25 feet of bottom cover in some areas. Due to natural forces an underwater pipeline can become shallower over time and move from its original location. It will usually

be shallower near the shoreline or riverbank. If a depth of cover range is required for the project, the pipeline company has the option to provide that data.

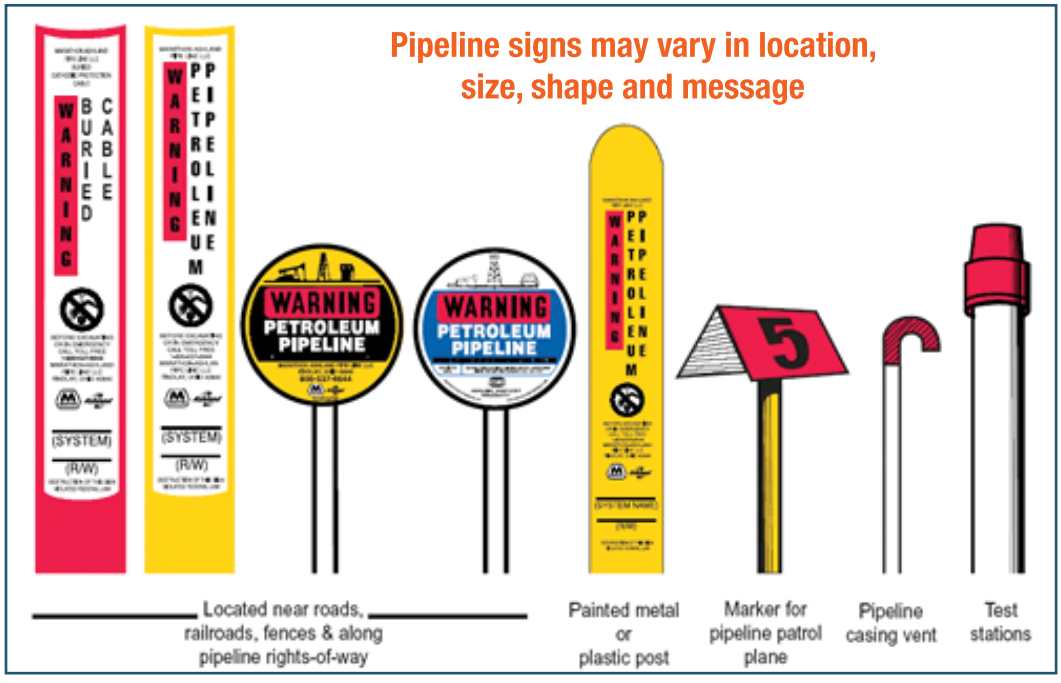
Note: Depth of cover for any underwater pipeline can vary widely. Ensure a minimum draft clearance of 3 feet when transiting over underwater pipelines.

1.8 Pipeline Location

Do not rely solely on maps, permit data, charts, and other 3rd party sources, which may have inaccurate pipeline location information. Underwater pipelines can shift their locations over time. Always rely on the pipeline company to provide location data. The pipeline company shall provide boundaries to work around or inform you that the work area will be "clear" of pipelines. Location data may be in the form of GPS (X,Y,Z coordinates), maps, landmarks, or other means. It is essential that both the project manager and the pipeline company representative have direct and detailed discussions on the locations of all underwater pipelines that could be impacted.

Pipeline marker, CAMO

Note: Underwater pipelines that are permitted by the U.S. Army Corps of Engineers (USACE), but never installed by the pipeline company, will still appear on the project plans and specifications - unless the pipeline company formally informs USACE that it was never installed. Treat such lines as active, especially if they are listed in the federal and state pipeline databases.



1.9 Pipeline Markings and Signs

Marking pipelines in marine areas is very challenging. Markers can be accidentally moved or removed by weather events, wave action, boats, vessels, erosion, etc. Pipeline signs may say "Do Not Anchor or Dredge" or "Warning: Petroleum or Gas Pipeline." Some states may require more detailed information on pipeline signs, such as "Highly Explosive." Pipeline signs and markers often state the

company name, pipeline type, and emergency contact number. This is very important information that is readily available in the field. If a pipeline accident occurs, look for a pipeline marker or sign nearby, and call the emergency number immediately.

1.10 Survey Marking

If an underwater pipeline is temporarily being marked for a project, ask the pipeline company what type of marker will be used so it can easily be identified. Markings can be buoys, cane poles, PVC pipe, etc. The pipeline company may provide GPS coordinates to electronically mark the pipeline aboard the dredge and marine vessels.

Note: Pipeline signs and markers are generally not lighted; therefore, visibility at night, during rain, or in foggy conditions needs to be considered in reconnaissance, pre-project planning, and execution.

Underwater pipelines that are abandoned and/or removed by the pipeline company will still appear on the project plans and specifications, unless the pipeline company formally informs USACE that it was abandoned and/or removed. Pipeline removal can be partial or full. Partial removal is when only a section is removed, such as the center section in the navigation channel. Other sections of the pipeline may be left behind and intact along the slopes near the shoreline. Treat such pipelines as active, especially if they are listed in the federal and state pipeline databases.

Section 2:
Reporting Proposed Dredging and Marine Construction Projects

Section 2: Reporting Proposed Dredging and Marine Construction Projects

Dredging and marine construction activities may directly impact the water bottom where underwater pipelines and other utilities may exist. Obtain location information directly from the owner by contacting an 811 One Call Center at least 7 business days before starting work. Every state has laws for notifying an 811 One Call Center, and it is a free service. Know the 811 One Call requirements for the state in which you are working.

2.1 Identify Your Work Area(s)

Dredging and marine construction activities may encompass large areas, some of which may be on land. Identify all locations where any water bottom or wetland contact may occur. This includes material placement areas, heavy equipment transit ways across placement areas, equipment mooring areas, staging areas, off-loading areas, site access areas, anchoring and spud down areas, and any other areas of operational impact.

2.2 Information 811 will Need from You

811 Know what's below. Call 811 before you dig.

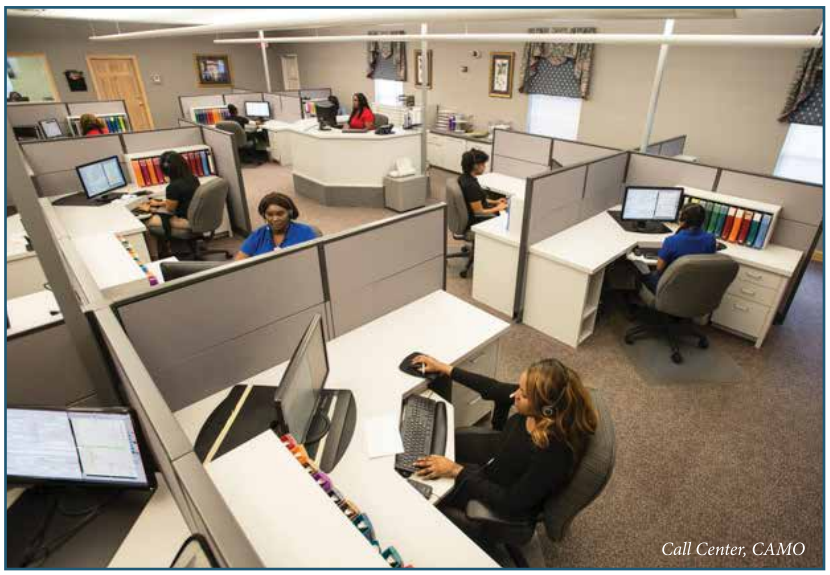
811 will need your name, company name, phone number, e-mail address, location of work, type of work, and start and end dates. For marine notifications provide GPS (X,Y,Z coordinates), name of vessel(s), name of captain(s), and captain contact number(s) in the comment section.

2.3 How 811 Works

811 is a free service funded by companies who own the pipelines and utilities (electric, fiber-optic, water, sewer, etc.) under water or in the ground. Once you submit a notification of work, the one call center forwards a ticket to its subscribing companies. If work activities are close to the lines, the companies will contact you with location details and advise how to avoid them.

2.4 How to Notify the 811 One Call Center

Either dial 811 or submit an online ticket. To find the online ticket notification process search for the State Name where work is being performed, followed by 811, ex. "Louisiana 811." First-time users may need to register in order to initiate an online ticket. Online notification systems often allow greater flexibility to draw shapes around the work area(s).



Call Center, CAMO

2.5 Wait for a Response

811 will give you a Ticket Number that you must have available at all times. If a pipeline is impacted by your work or in close proximity to your work, the owner is required to mark the line within 2-3 days but it may take as long as two weeks (in marine environments). Do a follow-up call if you have had no response.

2.6 Communication

This is the most important action to keep the personnel aboard a vessel safe. Pipelines may need to be surveyed or marked before commencing operations. All parties must communicate timeframes and the type of work to be performed. Understanding and accounting for all risks begins with information exchange - a process facilitated by following state laws and contacting 811 before starting the project.

2.7 811 Process Overview

- 811 Process: Notify your local one call center by calling 811 or making an online request at least 7 business days before work begins. Be sure to check your state to find out how far in advance you need to call.
- Wait the required amount of time for the pipeline/utility companies to respond to your request.
- Confirm that all the pipeline/utility companies have responded to your request and marked their underground/underwater pipelines and utilities.
- Respect the marks by clearly communicating with all personnel on board.
- Dig carefully around the marks.
- If needed, renew the notification before time expires.

Photo courtesy of CAMO

Section 3:
Avoiding Pipelines

Photo courtesy of CAMO

Section 3: Avoiding Pipelines

Pipelines need to be respected for their potential hazardous impacts to human life and the environment when ruptured. Tolerance Zones are areas near the pipelines where no activity or work should occur. Understanding the roles pipeline and marine construction companies play in safety and damage prevention will help create a successful project. Precautions by all parties need to be understood, agreed to, and in place before the project begins.

Avoidance procedures should be followed for marine construction projects of all sizes. Pipeline companies and marine construction companies generally have in-house tolerance zones or "no-go zones" where work may be unsafe or have special conditions. Before work begins all parties should be in mutual agreement on the tolerance zones.

3.1 Tolerance Zones

A tolerance zone is a predefined horizontal distance extending from the outer edge or wall of a pipeline/ utility. The exact distance is defined by law, and it varies from state to state, ranging from 18 to 30 inches on each side. Those small distances, however, were designed for on-land application and are too small for marine activities.

3.2 Tolerance Zone for Pipeline Companies

There is no tolerance zone rule for underwater pipelines. Generally, pipeline companies will initially request a clearance minimum of up to 500 feet on each side of the pipeline, but depending on the type, magnitude, and scope of work, they may allow closer distances upon request.

3.3 Tolerance Zone for Marine Construction Companies

Although tolerance zones vary among dredging companies, 75 feet appears to be the no-go working distance for most.

Section 4:
Obtaining and Providing Pre-Project Information

Section 4: Obtaining and Providing Pre-Project Information

Due diligence is necessary when gathering pipeline coordinates, ownership, and contact information. Multiple sources must be checked, and inconsistencies may exist across those sources. In many cases other types of lines may exist in your project area, such as electric, water, fiber optic, phone, and sewer, to which the same general precautions below apply.

Familiarize yourself with the different pipeline resources available. Each data source has a different layout and provides different information. Do not be shy to question the pipeline companies. It is their responsibility to provide you with the facts. Before a project starts, all parties must agree on project plans, crossing agreements, avoidance and safety measures, and work together to stay informed through project duration.

4.1 Project Scoping

Once your marine construction project scope is known, outline your total project footprint in your execution plan and voyage plan. Identify all waterways, wetlands, and marine areas that will be traversed by project vessels. This includes dredged material placement areas, heavy equipment transit ways across placement areas, equipment mooring areas, staging areas, off-loading areas, site access areas, anchoring and spud down areas, and any other areas of operational impact.

4.2 Customer Data Request

Your first data request should be made to the client. For example, if the project is in a federal body of water, like a port, harbor, or waterway, consult with the U.S. Army Corps of Engineers and refer to the information provided in the project plans and specifications.

4.3 National Pipeline Mapping System (NPMS) Public Map Viewer

Operated by the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), the NPMS database collects information on all federally-regulated pipelines and should be consulted before every project. NPMS shows general pipeline locations, current owner/operator name, and contact information. Type "National Pipeline Mapping System" into any search engine, click "General Public," and then click "Launch the Public Map Viewer." There is a helpful video link called "About Public Map Viewer" on the General Public page.

- NPMS does, however, have the following limitations:
- Does not include offshore pipelines in federal waters beyond state boundaries.
- Does not include flow lines within state boundaries.
- Does not include non-regulated pipelines.

4.4 811 Survey for Existing Lines

For advanced project planning to identify pipelines and utilities, some 811 One Call centers provide a survey ticket notification service for existing lines. Contact the 811 one call center in the state you are working and ask if that type of service exists. Like a normal 811 notification, you will need to provide details on your proposed project area. The One Call center should provide a list of pipelines and utilities

in the area where the project will be executed, but marking lines in the field is not required. Your project team may receive a call from the pipeline/utility owners, but contacting you directly is not required.

4.5 State Data Sources (includes flow or production lines)

Flow lines and production lines are a potential hazard and are regulated at the state level. However, which agency manages such pipeline information varies by state. For example, in Louisiana, the agency is the Department of Natural Resources, Office of Conservation. In Texas, it is the Texas Railroad Commission. When planning a project, contact the state regulatory agency and ask "Where can production line data be found?" Refer to the Resources Section for more guidance on finding state-level information.

4.6 Other Data Sources

Refer to the Resources Section to obtain information on other publicly available data sources that may be helpful with your project.

4.7 Whom to Inform

Company engineers, project managers, and/or site managers should inform pipeline companies as early as possible in the project cycle. Invite the pipeline company to give feedback on pipeline avoidance measures. Each company has different requirements. The company may ask for a crossing agreement or other legal documents to help protect the line. Communication and agreement on the scope of work is essential.

Note: If a project requires an underwater pipeline to be matted or lowered, additional time may be needed. Inform the pipeline company as soon as possible.

4.8 Roles of Pipeline Personnel

Be familiar with the various pipeline company personnel responsible for pipelines.

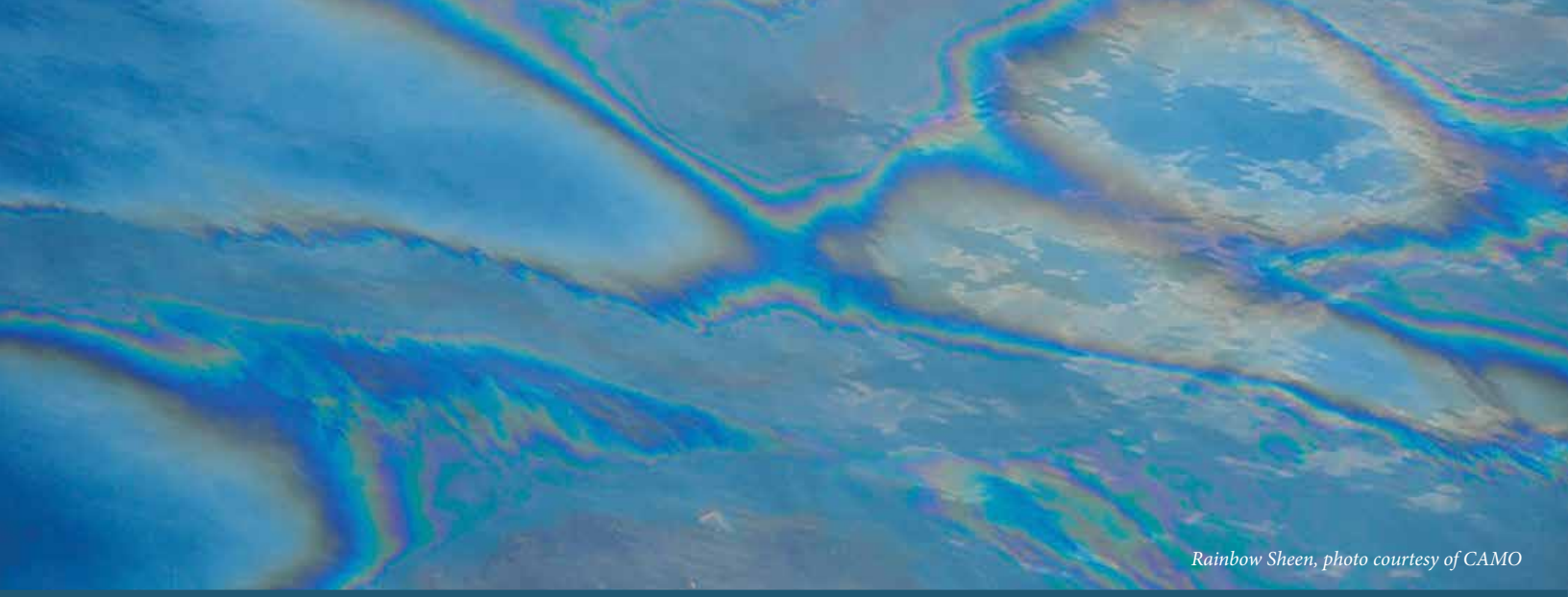
- Pipeline Technician/Right-of-Way or Damage Prevention Representative – responsible for facilitating project commencement and marking pipelines.
- Land Agent - handles legal agreements.
- Pipeline Controller - remotely monitors pipelines on a 24/7 basis and serves as the emergency contact.
- Operations Manager/Engineer – participates in decision-making.

4.9 Pipeline Support

Once you have notified the pipeline company and obtained its contact information, reach out as soon as questions arise or the project scope changes. If needed, request to have a representative be onsite as work is executed near underwater pipelines in order to assist in proper avoidance measures. The representative may also provide coordinates and contact information for other pipelines in the area.

4.10 Other Lines

In addition to oil and natural gas pipelines, there may be utilities, such as electrical lines, water/brine lines, sewer lines, telecommunication lines, and fiber optic cables in the project area. The same general precautions should be followed.

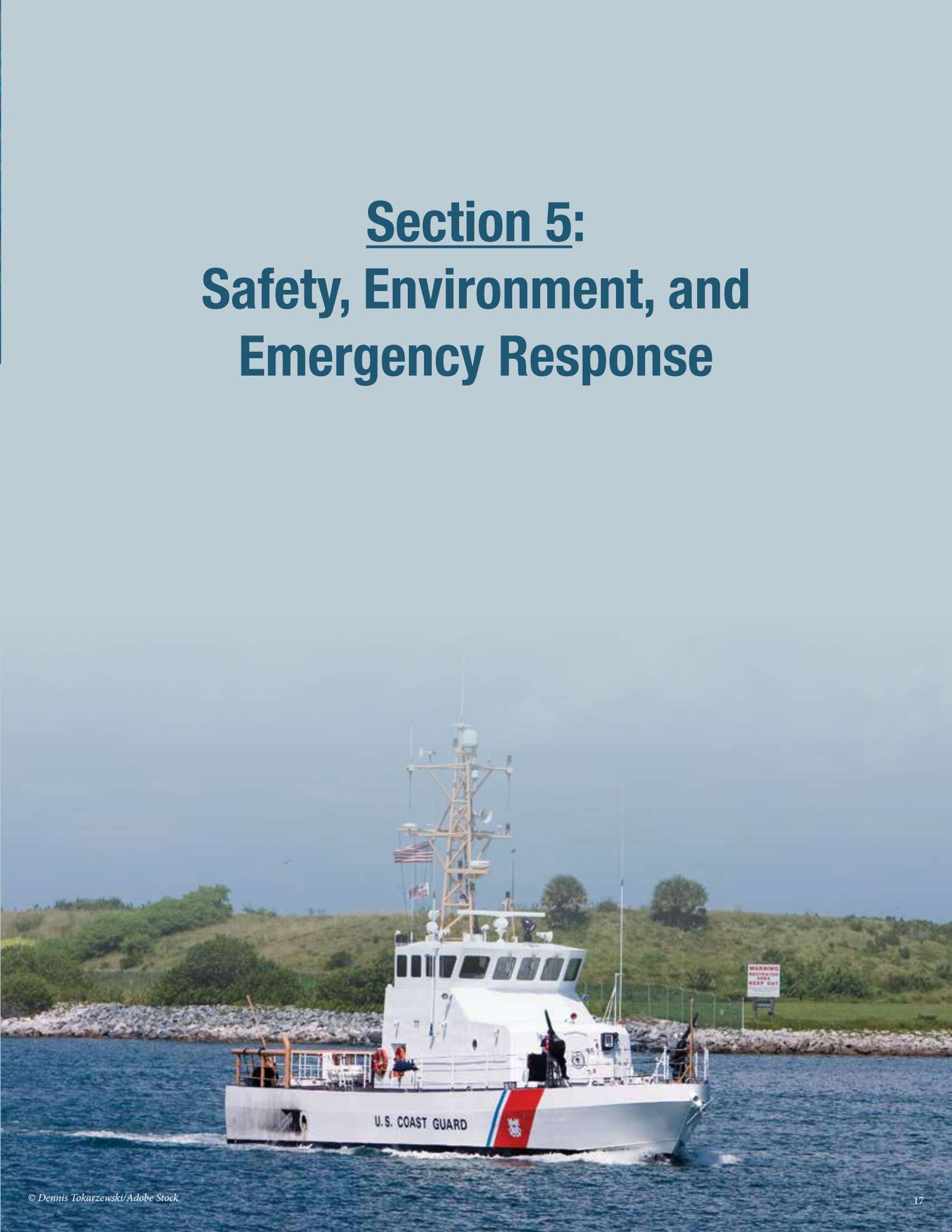


Rainbow Sheen, photo courtesy of CAMO

Boom Deployment, © Rick Wilking/REUTERS

Gas Bubbles, photo courtesy of CAMO

Section 5:
Safety, Environment, and Emergency Response



Section 5: Safety, Environment, and Emergency Response

Saving lives, protecting the environment, and effectively responding to emergencies are the focus of this guide. Ask the pipeline company if there are any specific safety, environmental, or emergency concerns and capture them in your safety plan. Cover the plan with all project and vessel personnel. Re-evaluate the plan as new hazards emerge. Include the following recommendations in your plans.

5.1 How to Identify a Pipeline Leak

The main signs of a pipeline leak are the following:

- A continuous bubbling, blowing, or hissing sound from the water;
- A rainbow sheen or unusual colored, and
- Hydrocarbon smell.

Note: Natural gas maybe odorless. Having an active gas detecgtor during operations is recommended. Always have an active gas detector activated during operations.

5.2 Actions after a Pipeline Leak

- Shutdown or minimize the use of all possible ignition sources: motors, lights, etc.
- If possible, drift out of the area before starting a motor or ignition source.
- Evacuate the vessel if needed.
- Evaluate the situation; record your exact location and time; and move upwind at least ¼ mile or away from the affected area. When safe, call 911.
- Prevent and warn other vessels from entering the area.
- Boom-off or secure the area if possible.
- If you see a pipeline sign nearby, call the emergency number listed.

5.3 Emergency Response and Notification

- Be aware of the following when addressing a pipeline leak:
- Do not extinguish a pipeline fire.
- Immediately contact the pipeline company 24/7 emergency number in your plan to shut down the line and provide any pipeline information and location data that you have. This will help the pipeline company identify the impacted line.
- Wind and water flow direction are helpful to have, as well as the nearest boat launch.
- Notify the Coast Guard and the National Response Center (NRC) at 800-424-8802.
- Call 911 to notify local emergency response agencies.
- Check your state's laws for other entities you must notify, such as the Louisiana State Police Hazardous Materials Hotline: 877-925-6595.

5.4 Safety and Emergency Plans

- All project plans should have the following basic pipeline information stored in multiple readily-available locations:
- List of all pipelines in the project scope

List of the products in each pipeline (This will help evaluate the risk and response level in the event of a release.)

- Size of the pipeline diameter
- 24/7 emergency contact number
- Local pipeline company representative contact number
- If you think a pipeline was struck but no leak occurs, call both the emergency and local contacts. (In many states, reporting a strike is required by law.)

Fire from pipeline strike, CAMO

Section 6:
Understanding Dredging and Marine Construction

Section 6: Understanding Dredging and Marine Construction

Pipeline right-of-way staff, land agents, engineers, and operations employees need to understand certain information when planning for a dredging or marine construction project in order to prevent pipeline damage and loss of life. In addition to the information below, unique situations may arise that require frequent communication and mitigation of risk early and often.

Proactively engage with the contractor to improve pre-project scoping and risk mitigation and take every opportunity to ask the contractor basic information about its operations in your project area.

6.1 What Pipeline Personnel Need to Know

Dredging and marine construction activities are performed for a variety of reasons:

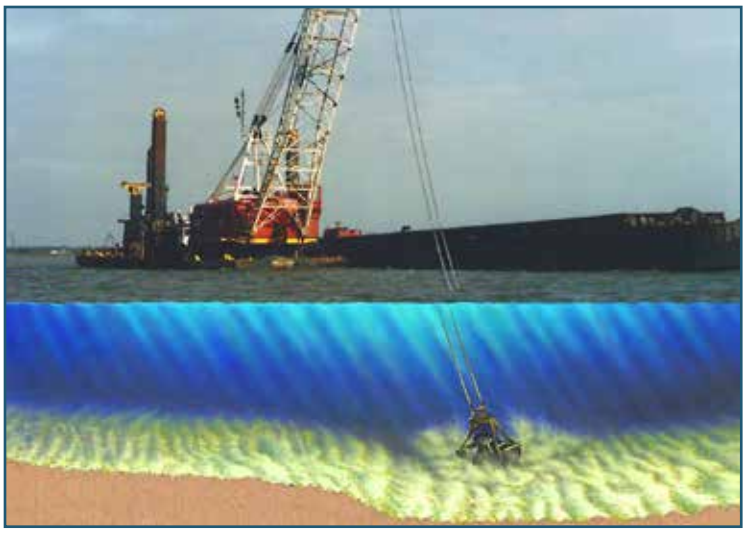
- Environmental restoration, including beach nourishment and coastal protection;
- Port, harbor, and river channel deepening and maintenance for navigation;
- Pile driving and bulkhead, levee, and camp construction;
- Site clearance, drilling, and installation and abandonment of platforms.

Oil Rig Lifting, © Kithanlea/Adobe Stock

6.2 Primary Types of Dredges

Understanding how different types of dredges operate is critical for planning to protect pipelines. Some dredges and marine equipment move by dropping large anchors or "spuds" at multiple intervals along their path. Their depths must be known in relation to the depths of the underwater pipelines. Changing pipeline tolerance zones may be necessary for larger operations. Be familiar with these types of dredges:

- Hopper Dredge
- Cutter Suction Dredge
- Clamshell Dredge
- Backhoe Dredge



Clamshell / Bucket Dredge

Self-Propelled Hopper Dredge

Hydraulic Cutter Head Dredge

Backhoe Dredge, © Alan Smillie/Adobe Stock

6.3 Primary Types of Marine Construction Equipment

Any type of marine equipment that contacts the water bottom under its normal operation is a threat to underwater pipelines. Make special provisions in your project execution plan and discuss this during the project hand-over meeting to protect underwater pipelines from the following:

- Spud barge or spud boat
- Jack-up and lift boats
- Pile driver (crane or excavator)
- Long-reach excavator
- Marsh backhoe
- Vessels with large anchors
- Other construction equipment, support boats, or vessels

Lift Boat, CAMO

6.4 Dredged Material Placement Areas

It is not only where the vessel goes that matters. The location and volume of material transported to placement areas are vitally important pieces of information. To avoid negative impacts, these areas should be included in an 811 One Call Notification.

6.5 Accuracy of Pipeline Locations

Pipeline personnel need to ask questions, review, and consolidate pipeline data with the contractor. This is a very important issue that all parties need to understand and mitigate before the project starts.

Dredging and marine construction are more complicated than on-land excavation activities. Essential actions to take include:

- Identify all pipelines within the project scope.
- Attend pre-project scoping and kick-off meetings hosted by the contractor.
- Ensure applicable pipeline crossing agreements and other legal documents are addressed early and finalized in the project execution plan.

Note: In this section, unless otherwise noted all photos are from this source: Welp, T.L., & Ray, G.L. (2011); Application of Long Distance Conveyance (LDC) of Dredged Sediments to Louisiana Coastal Restoration.

6.6 Questions to Ask Dredging and Marine Construction Companies

Asking the right questions will help identify hazards. Record answers to the questions below in your communication plan, project execution plan, and emergency response plan:

- Will spuds or anchors be used? When, where, and how?
- What are the spud or anchor penetration depth, dimensions, and weight?
- Is the discharge pipe laid out and moved by heavy equipment?
- Is the material placement area near a pipeline?
- Where does dredged material go, and is it moved by heavy equipment?
- Account for dredged material weight, mats, or equipment over the pipeline.
- Draw ingress and egress points on a field map or diagram.
- Identify 24/7 contact numbers for the dredging and marine construction companies.
- List hours of operations: day/night, 24/7, or other.
- Identify the type, purpose, and staging area of each support vessel. (These may be barges or other project vessels which may contact the water bottom away from the primary work area.)
- Identify overnight or project-pause locations for all vessels and heavy equipment.
- Specifically ask if any spudding or anchoring will occur when relocating for repairs, work stoppage, or maintenance that is not in the project location.

New Dredge Ship, © nicknick_ko/Adobe Stock

6.7 Pipeline Safety and Damage Prevention

Pipeline personnel should consult company requirements for underwater pipeline safety and get additional help from experts in that field. Marine pipeline incidents are far more impactful and difficult to manage than on-land pipeline incidents. It is highly recommended to have a damage prevention plan in place and customized for each project, using the data referenced in Section 6.6. The following are additional considerations:

- Identify the most hazardous situations.
- Evaluate risk to the pipeline(s) and have an appropriate action or response plan.
- Ask to be onsite when the dredge or other equipment is nearing the pipeline.
- Make sure the contractor knows how your pipeline is marked and that different pipelines may not be marked the same way.
- Tell the contractor if pipelines cannot be marked or accurately surveyed due to water conditions and depths. GPS coordinates may be an option.
- Do not miss planning or pre-project meetings, and document your engagements.

6.8 Sources for Learning More about Dredging

Dredging Contractors of America – dredgingcontractors.org
Council for Dredging & Marine Construction Safety – cdmcs.org

Section 7:
Project Planning for Safety Near Underwater Pipelines

Section 7: Project Planning for Safety Near Underwater Pipelines

Ensuring safety in all areas and completing a project on time can be complicated. Advance planning that identifies stakeholders and potential onsite problem areas can be keys to success.

Understand when to implement each step of pipeline identification, notification, and avoidance in order to safely perform the project. Start your timeline a few months before the project start date. (The below recommendations are not all-inclusive, as special considerations may arise. The timeframes listed are estimates and can be adjusted depending on the project.)

7.1 Two-Three Months before Bid or Project Start

- Obtain project bid documents.
- Create a Survey Ticket with 811 if that service is available.
- Obtain as-built drawings and permits from pipeline/utility owner or USACE and compare against other databases. (Refer to Section 4 and the Resources Section.)
- List all possible pipelines, line size, location, product, and pipeline personnel contact information.
- If there is potential for ANY dredging or construction actgivity within 500 ft. of a pipeline, contact the pipeline company as soon as possible and explain the project:
    - Ask what agreements, documents, or permits are required by the pipeline company to work near their pipeline.
    - Identify and list any avoidance measures and recommendations from the pipeline company.
    - Tentatively agree on a pipeline avoidance plan and document it for later use.
    - Ask the pipeline company for pipeline location data and compare with other sources.
    - Ask what other pipelines are in the area and who are the current owners.

7.2 One-Two Months from Project Start

- Include in project bid documents the measures for pipeline avoidance, etc.
- A physical pipeline survey may need to be conducted during this time.
- Invite pipeline companies to pre-project planning meetings.

7.3 One Month from Project Start

- Project design and field verification of project.
- Meet with impacted pipeline companies:
    - Provide project overview.
    - Agree to timelines.
    - Discuss roles and responsibilities along with field involvement – who does what and when.
    - Evaluate if a pipeline company representative will need to be onsite when work is executed near a pipeline. If so, schedule tentative dates.
    - Discuss types of pipeline markings and timing for markings to occur.
    - Ask for the GPS (X,Y,Z coordinates) of the pipelines.
    - Identify and list special considerations and mitigations from the pipeline companies.
- Discuss discharge pipe and dredged material placement areas:
    - Equipment used
    - Weight over the pipeline, mats, etc.
- Discuss and agree on tolerance zone distances around pipelines.
- Discuss and agree on a plan if a pipeline strike occurs. Who will do what?

7.4 Three Weeks from Project Start

- Hold a pre-construction meeting with the pipeline companies.

7.5 Two Weeks from Project Start

- Make the 811 One Call Notification at least 7 business days prior to project start:
  - Provide contact information for the dredging project manager or superintendent and the name of the dredge used.
  - Add any water bottom contact and dredged material placement areas to the 811 one call notification, so all pipeline and utility companies can be notified.

Note: Some pipeline companies have an Automatic Identification System (AIS) around their pipelines that tracks vessel location and notifies the pipeline company when a dredge enters the pipeline buffer zone.

- Pipeline companies start the process of marking lines and provide pipeline locations (GPS, maps, etc.).
- Parties should agree on all terms presented and discussed.
- Legal/crossing agreements should be completed.
- Confirm if a pipeline company representative will be onsite as work is executed and is able to shutoff flow to any pipelines if necessary.

7.6 One Week from Project Start

- Dredging company should verify that ALL pipelines have been marked or have data on exact locations (GPS, maps, etc.). Note: Pipelines may be marked differently by different companies.
- Verify that a copy of all pipeline contacts has been given to the dredge captain or onsite personnel and is kept readily available.
- Verify that all special requests have been satisfied and agreed to by all parties.
- Communicate the pipeline crossing schedule and timeframe to the pipeline company.
- Reconfirm that a pipeline company representative will be onsite as work is executed and is able to shutoff flow to any pipelines if necessary.
- Agree on the dredge route, support vessel(s), and disposal activities.
- Agree on tolerance zone distances around pipelines (where dredging, spudding, anchoring, etc. are not to occur). Verify that project planning maps with pipeline locations have been uploaded and are displayed on the vessel guidance computers and/or navigation-aiding devices of all floating plant.
- Review emergency response and evacuation procedures.
- Get started and have a safe project!

INFORMATION RESOURCES

Federal Agencies

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA) of the US DEPARTMENT OF TRANSPORTATION: https://www.phmsa.dot.gov/

NATIONAL PIPELINE MAPPING SYSTEM (NPMS) – www.npms.phmsa.dot.gov

- Using public map viewer – gas (blue) and hazardous liquid (red) transmission lines
- How to get contacts for pipelines in an area – "about public map viewer"

This website may be used for viewing gas and hazardous liquid transmission lines in every state.

BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM) – www.boem.gov

GIS DATA/SHAPEFILES for wells, pipelines and platforms in federal waters can be accessed from this website (www.boem.gov/Maps-and-GIS-Data/).

U.S. ARMY CORP OF ENGINEERS: www.mvn.usace.army.mil

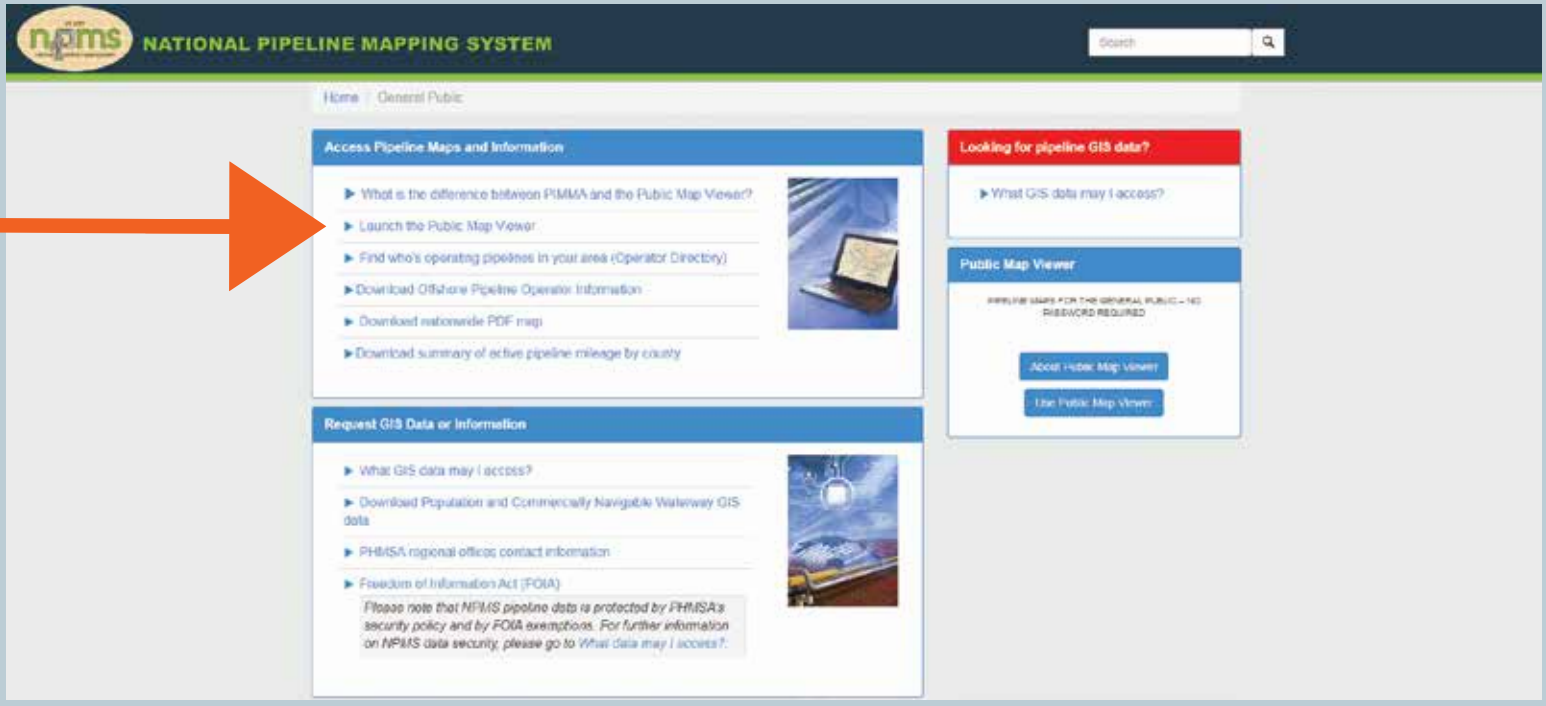
- CONTRACTING – DOING BUSINESS WITH US – 504-862-2865
- CONTRACTING – PLANS AND SPECIFICATIONS/BID INFORMATION – 504-862-2875
- ENGINEERING DIVISION – 504-862-2240
- NAVIGATION – 504-862-1058

NOAA – OFFICE OF COAST SURVEY

- Navigation Services Division
- Regional Navigation Managers
  https://nauticalcharts.noaa.gov/customer-service/regional-managers/index.html
- NOAA's navigation managers, stationed strategically in port areas along U.S. coasts and Great Lakes, work directly with pilots, mariners, port authorities, and recreational boaters.
- Access NOAA's Electronic Navigation Charts (ENCs) – updated weekly

National Pipeline Mapping System Link

NPMS Website
www.npms.phmsa.dot.gov/



Regional Information

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA), US DOT:

PHMSA Regional Offices: https://www.phmsa.dot.gov/about-phmsa/offices

PHMSA Community Liaison Services: https://primis.phmsa.dot.gov/comm/cats.htm

US ARMY CORPS OF ENGINEERS: https://www.usace.army.mil/Locations/aspx

COASTAL AND MARINE OPERATORS (CAMO): www.camogroup.org
Industry initiative for pipeline and public safety: Ed Landgraf, Chairman: 985-209-4753

State Information

FOR ONE CALL: Online, search for "state name + 811"

TO IDENTIFY THE STATE AGENCY THAT REGULATES PIPELINES AND OIL/GAS PRODUCTION LINES AND EQUIPMENT, KNOW THAT THERE MAY BE MORE THAN ONE.

Search online for: "state name + pipeline regulations" and" state name + dredging permits," etc.

It varies state-by-state, and it could involve one or more entities such as:

- Oil & gas commission,
- Railroad commission,
- Environmental quality agency, or
- Conservation or natural resources department.

Examples for Working in Louisiana

PHMSA SW REGION OFFICE: https://www.phmsa.dot.gov/about-phmsa/offices/southwest-region

- Regulates interstate gas & hazardous pipelines ines in LA, TX, AR, OK & NM
- Mary McDaniel, Region Director: 713-272-2859 (Main Line)
- Community Liaison Services: Bill Lowry – 713-272-2845; Jay Prothro – 713-272-2832

LOUISIANA ONE CALL: www.louisiana811.com

- All excavators are required to call "811" prior to excavation. It maintains a database of shape files for all utilities within the boundaries of Louisiana.
- David Frey, Director – 225-275-3700, Ext. 401; Brent Saltzman, Manager – 225-275-3000, Ext. 404

LOUISIANA OFFICE OF CONSERVATION-DEPARTMENT OF NATURAL RESOURCES

- PIPELINE DIVISION
  Steven Giambrone, Division Director; 225-342-5505 (Main Line)
  Regulates intrastate gas/hazardous liquids
- ENGINEERING DIVISION
  Regulates well sites, platforms, production lines & production equipment
  Brent Campbell, Division Director; 225-342-6986 (Main Line)

Checklists for Daily Use During Projects

Safety

Review these points at pre-job, toolbox, shift change, daily project & safety meetings.

See Something – Say Something – Act Immediately

1. Confirm 811 "Call Before You Dig" notification was made for this work site.

2. Discuss with crew each pipeline's information:
   - Name of each company & 24/7 contact.
   - Physical line location(s) & how to I.D. them.
   - Verify pipelines are surveyed and marked.
   - Review tolerance areas or "No Go" zones.
   - Ensure all pipeline locations appear in onboard software or navigation systems (e.g., Hypack or applicable software).
   - Verify pipeline avoidance measures are in place for heavy equipment, dredge discharge and staging areas.

3. Assign walk-arounds during anchoring or spud activities to look for leaks: bubbles, rainbow sheen, and hydrocarbon smell.

4. Discuss all updates or concerns from yesterday.

5. Confirm spud plans, safe mooring and anchor locations for all project vessels.

6. Review water depths vs. drafts for all vessels near pipelines; 3 ft. clearance recommended.

7. Verify if a pipeline company representative has agreed to be on site and ensure they are present before work begins.

8. Ensure all pipeline crossings are identified in the onboard construction or dredge plan.

9. Always assume a pipeline is active.

10. **Unknown pipelines could exist – BE ALERT.**

*FOR MORE INFORMATION, obtain **Working Safely Near Underwater Pipelines: Recommended Best Practices Guide for Damage Prevention.** You can download it from the sites below. These documents do not replace or override any regulation or individual company's health, safety, and environmental protocols.

www.camogroup.org and www.saveourlake.org

Emergency

Shut down – Communicate – Evacuate

IF YOU RECOGNIZE A SIGN OF A PIPELINE LEAK:

1. **STOP all operations and keep yourself safe.**
2. **Shut down or minimize use of possible ignition sources: motors, generators, lights, etc.**
3. **Account for all crew members and communicate the hazards to them.**
4. **Call 911, channel 16, or the USCG and describe your location & situation.**
5. **If possible, drift out of the area before starting a motor or ignition source.**
6. **Evacuate the vessel if needed.**
7. **Evaluate the situation; record your exact location and time; and move upwind at least ¼ mile from the affected area.**
8. **If you see a pipeline sign nearby, call the emergency number listed.**
9. **Do not try to extinguish a pipeline fire.**
10. **Notify the U.S. Coast Guard and the National Response Center (NRC): 800-424-8802.**
11. **Call 911 again: update emergency responders.**

This document was funded through a Technical Assistance Grant (Project #693JK31840018PTAG) awarded to the Lake Pontchartrain Basin Foundation from the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. All contributors shall be held harmless from any interpretation or application of the information contained herein.

Pipeline Safety is Everyone's Responsibility:

- Keep Yourself Safe
- Avoid Pipelines
- Report Any Release or Suspicious Activity to Authorities
- Call 811 to Locate Pipelines

811®

Know what's below.
Call 811 before you dig.

Safety

Review recommended at pre-job, toolbox, shift change, daily project & safety meetings.

See Something – Say Something – Act Immediately

1. Confirm 811 "Call Before You Dig" notification was made for this work site.

2. Discuss with crew each pipeline's information:
   - Name of each company & 24/7 contact.
   - Physical line location(s) & how to I.D. them.
   - Verify pipelines are surveyed and marked.
   - Review tolerance areas or "No Go" zones.
   - Ensure all line locations are in onboard dredging software or navigation systems (e.g., Hypack or applicable software).
   - Verify pipeline avoidance measures for heavy equipment, dredge discharge areas, and material disposal sites.

3. Assign walk-arounds during anchoring or spud activities to look for leaks: bubbles, rainbow sheen, and hydrocarbon smell.

4. Discuss updates or concerns from yesterday.

5. Confirm spud plans, safe mooring or anchor locations for all project vessels.

6. Review water depths vs. drafts for all vessels near pipelines; 3 ft. clearance recommended.

7. Verify if a pipeline company representative has agreed to be on site and ensure they are present before work begins.

8. Ensure all pipeline crossings are identified in the onboard construction or dredge plan.

9. Always assume a pipeline is active.

10. **Unknown pipelines could exist – BE ALERT.**

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www.camogroup.org and www.saveourlake.org

Emergency

Act Immediately if a Pipeline Strike is Suspected

Shut down – Communicate – Evacuate

If you recognize ANY signs of a pipeline leak, follow these steps:

1. Immediately stop all operations and keep yourself safe.
2. Shut down or minimize use of possible ignition sources: motors, generators, lights, etc.
3. Account for all crew members and communicate the hazards to them.
4. Call 911, channel 16, or USCG and describe your location & situation.
5. If possible, drift out of area before starting a motor or ignition source.
6. Evacuate the vessel if needed.
7. Evaluate the situation; record your exact location and time; and move upwind at least ¼ (land) mile (1,320 ft.) or away from the affected area.
8. If you see a pipeline sign nearby, call the emergency number listed.
9. Do not try to extinguish a pipeline fire.
10. Notify the U.S. Coast Guard and the National Response Center (NRC): 800-424-8802.
11. Call 911 again to update the situation for emergency responders.

COASTAL AND MARINE OPERATORS
CAMO

LPBF
SAVE OUR LAKE
SAVE OUR COAST
LAKE PONTCHARTRAIN BASIN FOUNDATION

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