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INTRODUCTION & DISCLAIMER

This recommended best practices guide (“guide”) promotes safe dredging and marine construction operations near underwater gas and hazardous liquid pipelines (“pipelines”) located in U.S. Army Corps of Engineers (USACE) federal navigation channels.\(^1\) It was developed by the Council for Dredging and Marine Construction Safety (CDMCS) in consultation with professionals working in and regulating the dredging and pipeline industries. It does not replace or override any individual entity’s health, safety, and environmental protocols. This is a general recommendation on suggested considerations in the dredging and marine construction industry. This guidance does not create an obligation or requirement on any private sector company or public or government entity involved in its production.

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) applicable local laws, regulations and ordinances. This guide is not a substitute for any employer or industry practice, nor does it supersede any applicable local, state or federal law, regulation, ordinance or policy.

The CDMCS and its members shall be held harmless from any interpretation or application of the information contained herein.

\(^1\) USACE federal navigation channels as referenced in this document are to include those channels USACE contracts with industry to dredge for others.
Dredging companies and pipeline companies must work together to ensure safe dredging activity around pipeline facilities. 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 dredge contacting a pipeline continues to grow. Accidental interactions and incidents have caused spills, outages, gas releases, injuries, and loss of human life.

Pipeline Incident Prevention is a recommended best practices guide ("guide") for the dredging and pipeline industries. It addresses pipeline safety, damage prevention, and emergency response in the marine environment. All mariners and pipeline personnel involved in dredging and marine construction activities should consider this guide a resource and keep it readily available.
SECTION 1: UNDERSTANDING PIPELINES
(FOR DREDGING COMPANIES)

This section provides help for planning, identifying, and avoiding pipelines. It is for dredging and marine construction personnel, including (assistant) project engineers, (assistant) project managers, superintendents, captains, and equipment operators. These recommendations are not all-inclusive. 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 pipeline in your project area and incorporate the following ten elements into your planning, project scope, pipeline avoidance, and emergency response plans. Resources for locating this information are in Appendix II.

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.

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 and providing information on their exact locations and serves as the pipeline company’s point-of-contact (POC) for the dredging company.

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 the dredging company’s contingency plans to minimize safety and environmental risks if a release occurs.

1.4 PIPELINE VS. FLOW OR PRODUCTION LINE
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. Either type of line may be subject to local, state, and/or federal laws/regulations, but the laws that apply can vary.

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 shut down, it can take several hours for the pressure to bleed down to a safe level.
**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 a 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. Ensure a minimum draft clearance of 3 feet when transiting over pipelines.

**PIPELINE LOCATION**

Do not rely solely on 3rd party pipeline maps, permit data, and charts. Pipelines can shift over time. Always rely on the pipeline company to provide the most accurate location data. The pipeline company should 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 dredging project manager and the pipeline company representative have direct and detailed discussions on the locations of all pipelines that could be impacted.

**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.

**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.

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

Use extra caution when operating during extreme high water (flood) and low water (drought) events. Vessels can drift into unsafe areas outside the navigable channel and make contact with normally aboveground features like river valves and the ends and anchors of pipeline crossings. Pipeline markers and signage may not be visible either and could become obstacles and points for damage.
PIPELINE STATUS AND EXCLUSIONS

Pipelines that are permitted by USACE, but never installed by the pipeline company, may still appear in USACE project plans and specifications. Treat such pipelines as active, especially if they are listed in the federal and state pipeline databases.

Pipelines that are abandoned and/or removed by the pipeline company may still appear in USACE project plans and specifications. 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.

Dredging companies should cross-check all pipeline information provided in USACE project plans and specifications with federal and state pipeline databases and the pipeline companies themselves.
SECTION 2: REPORTING DREDGING AND MARINE CONSTRUCTION ACTIVITIES
(FOR DREDGING COMPANIES)

Dredging and marine construction activities may directly impact the water bottom where 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 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. It is essential that these details be provided to the pipeline company in advance of the project.

An 811 One Call Notification should be made for each option awarded in a multi-option contract.

2.2 HOW 811 WORKS

Contacting 811 is a free service funded by companies who own pipelines and other utilities under water or in the ground. Once you submit a notification of work, the impacted companies are forwarded the notification. If work activities are close to their lines, the companies will contact you with location details and advise how to avoid them. Notification requirements and marking requirements vary because each state “call-before-you-dig” law is different. Dredging companies are encouraged to review state laws and regulations in advance of the project.
INFORMATION 811 WILL NEED FROM YOU

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.

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 notifications provide greater flexibility to draw boxes around the work area(s).

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 underground pipelines within 2-3 business days, but the wait time may be as long as two weeks in marine environments.

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.
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. Tolerance zones are generally addressed in state “call-before-you-dig” laws, in pipeline company policies and agreements, in USACE project plans and specifications, and in dredging company policies and agreements. Understanding the roles pipeline and dredging 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 dredging and marine construction projects of all sizes. Pipeline companies and dredging 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.

### TOLERANCE ZONES AND STATE ONE CALL LAWS

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 may not apply to marine activities like dredging.

### TOLERANCE ZONE FOR PIPELINE COMPANIES

There is no specific tolerance zone for underwater pipelines in most state laws. 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.

### TOLERANCE ZONE FOR DREDGING COMPANIES

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

### TOLERANCE ZONE FOR USACE CIVIL WORKS PROJECTS/NAVIGATION CHANNELS

Be sure to adhere to any no dredge, no spud, or no anchor zones included in USACE project plans and specifications.
SECTION 4:
OBTAINING PIPELINE INFORMATION AFTER CONTRACT AWARD
(FOR DREDGING COMPANIES)

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 utilities, such as electric, water, sewer, and telecommunications, may also exist in the project area 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. It is essential to obtain information and contacts from pipeline companies. 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, avoidance, and safety measures, and work together to stay informed through project duration.

PROJECT SCOPING
Once the dredge or marine construction project scope is known, the plan should outline the total project footprint in the execution plan and voyage plan. The plan should 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.

REQUEST FOR PIPELINE OWNERSHIP AND LOCATION DATA
The first data request should be made to the client. For example, if the dredging project is in a USACE federal navigation channel, consult with USACE and refer to the pipeline data and contact information provided in the USACE project plans and specifications.

Coordinate closely with USACE on all areas of operational impact, including dredged material placement areas.

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 mapping information on all PHMSA-regulated gas transmission and hazardous liquid pipelines (including interstate and intrastate pipelines) and should be consulted before every project. The NPMS shows general pipeline locations, the product in the pipeline, and the operator’s name and contact information. Type “National Pipeline Mapping System” into any search engine, click “General Public,” and then click “Launch the Public Map Viewer.” Click “About Public Map Viewer” on the General Public Page for a link to a helpful video about locating pipelines in the NPMS.
NPMS does, however, have the following limitations:

- Does not include offshore pipelines on the Public Map Viewer. (Offshore pipelines in state and federal waters will be added to the Public Map Viewer in early 2020.)
- Does not include liquid flow lines through onshore production, refining, or manufacturing facilities, amongst other in-plant and gravity lines.
- Does not include gas gathering, gas distribution, and pipelines not regulated by PHMSA, such as those regulated by the U.S. Coast Guard.

**811 SURVEY FOR EXISTING LINES**

For advanced project planning to identify pipelines and other utilities, some 811 one call centers provide a survey ticket notification service for existing lines. Contact the 811 one call center for the state where you are working and ask if that type of service exists. Like a normal 811 notification, provide details on your proposed project area. The one call center should provide a list of pipelines and other utilities in the area where the project will be executed, but marking lines in the field is usually not required. The 811 one call center will describe the services required under any type of survey ticket available in the state where the work is to be completed.

**NOAA ELECTRONIC NAVIGATIONAL CHARTS (NOAA ENC®)**

NOAA electronic navigational charts (NOAA ENC®) are vector datasets that support all types of marine navigation. Originally designed for large commercial vessels using a sophisticated navigational computer called an Electronic Chart Display and Information System (ECDIS), ENCs are now also being used on simpler electronic chart systems and “chart plotters” on many types of ships and by recreational boaters. ENCs help provide real-time ship positioning, as well as collision and grounding avoidance. ENCs depict the locations of pipeline symbols, pipeline areas, and caution areas related to pipelines that were reported to the Office of Coast Survey, but additional, uncharted pipelines may exist within the areas covered. Contact pipeline companies, state agencies, and federal agencies for additional information pertaining to pipeline locations. Consult the most recent ENCs during planning, navigation, and dredging operations.

**STATE DATA SOURCES**

**(includes flow or production lines)**

Flow lines and production lines are a potential hazard and are generally 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. The Texas authority is the Texas Railroad Commission. When planning a project, contact the state regulatory agency and ask, “Where can intrastate pipeline data be found?” Refer to Appendix II for additional state-level information.

**OTHER DATA SOURCES**

Refer to Appendix II for other publicly available sources that may be helpful to your project.
COMMUNICATION WITH PIPELINE COMPANIES

Company engineers, project managers, and 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.

For USACE federal navigation channels the dredging company should also notify any state, local, or federal government agencies required in the project specifications. Additionally, review with USACE at the preconstruction meeting the execution plan for dredging near any pipeline crossings in the project footprint.

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

ROLES OF PIPELINE PERSONNEL

Be familiar with the various pipeline company personnel responsible for pipelines. This may vary by company.

- Pipeline Technician / Right-of-Way Representative – facilitates project commencement and marks pipelines.
- Land Agent - handles legal agreements.
- Pipeline Controller - remotely monitors pipelines on a 24/7 basis and serves as the emergency contact.
- Operations Manager – participates in decision-making.

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.
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, oily residue;
- A hydrocarbon (gaseous) smell on the water surface.

Natural gas maybe odorless. Always have an active gas detector activated during operations.

Emergency response and notification

- Immediately stop all operations and keep yourself safe.
- Shut down or minimize the use of all possible ignition sources: motors, generators, lights, etc.
- Account for all crewmembers and communicate the hazards to them.
- Call 911 (required), Channel 16, or the U.S. Coast Guard (USCG) and describe your location.
• If possible, drift out of the area before starting an ignition source.
• Evacuate the vessel if needed.
• Contact the pipeline company emergency number in your plan to shut down the line.
• If you see a pipeline sign nearby, call the emergency number listed.
• Notify the USCG and the National Response Center (NRC): 800-424-8802.
• Check state laws for other entities you must notify, such as the Louisiana State Police Hazardous Materials Hotline: 877-925-6595.
• Notify USACE Quality Assurance POC, Safety POC, or Project Manager on the contract.

### 5.3 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
- 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. Reporting a regulated pipeline strike to the pipeline company is required by law.
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 dredging company to improve project scoping and risk mitigation and take every opportunity to ask for basic information about its operations in your project area.

### 6.1 WHAT PIPELINE PERSONNEL NEED TO KNOW ABOUT DREDGING

Dredging is performed for a variety of reasons:
- River and channel navigation
- Port and harbor deepening and maintenance
- Beach nourishment and coastal protection
- Environmental restoration

### 6.2 TYPES OF DREDGES

Understanding how different types of dredges operate is critical for planning to protect pipelines. Changing pipeline tolerance zones may be necessary for larger operations. Be familiar with the following dredge types:
- Backhoe Dredge
- Clamshell Dredge
- Cutter Suction Dredge
- Dustpan Dredge
- Hopper Dredge

Some dredges and marine equipment move by dropping large anchors or “spuds” at multiple intervals along their path. Cutter suction dredges may lower their cutterhead ladder into the water bottom to act as an anchor for positioning purposes. Their depths must be known in relation to the depths of the pipelines.

### 6.3 TYPES OF MARINE CONSTRUCTION EQUIPMENT

Any type of marine equipment that contacts the water bottom under its normal operation is a threat to pipelines. Make special provisions in your project execution plan and discuss this during planning meetings, preconstruction meetings, and kick-off meetings hosted by the dredging company in order to protect pipelines from the following:
- Spud barge or spud boat
- Pile driver (crane or excavator)
- Long-reach excavator
- Marsh backhoe
- Vessels with large anchors
- Other construction equipment, support boats, or vessels
ACCURACY OF PIPELINE LOCATIONS

Pipeline personnel need to ask questions, review, and consolidate pipeline data with the dredging company. 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 planning, pre-construction, and kick-off meetings hosted by the dredging company.
- Ensure applicable pipeline crossing agreements and other legal documents are addressed early and finalized in the project execution plan.

QUESTIONS TO ASK DREDGING COMPANIES

Asking the right questions will help identify hazards. Pipeline companies should record answers to the questions below in the communication plan, project execution plan, and emergency response plan:

- Will spuds or anchors be used? When, where, and how?
- What is the spud or anchor penetration depth, dimensions, and weight?
- Is the discharge pipe laid out and moved by heavy equipment?
- Is the dredged 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 company.
- List dredging 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 the dredge and associated vessels or 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.

PIPELINE SAFETY AND DAMAGE PREVENTION

Pipeline personnel should consult company requirements for 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 6.5. 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 dredging company knows how your pipeline is marked and that different pipelines may not be marked the same way.
• Tell the dredging company if pipelines cannot be marked or accurately surveyed due to water conditions and depths. GPS coordinates may be an option.
• Participate in all planning and pre-construction meetings and document your engagements.

PROVIDE NOAA WITH UPDATED PIPELINE INFORMATION
Pipeline companies are encouraged to provide NOAA with final as-built data and contact information by replying to NOAA’s annual Permit/Public Notice Status Report. This will ensure the accuracy of NOAA’s navigational charts.

SOURCES FOR LEARNING MORE ABOUT DREDGING

COUNCIL FOR DREDGING & MARINE CONSTRUCTION SAFETY

www.cdmcs.org

Dredging Contractors of America

www.dredgingcontractors.org

Great Lakes Dredge & Dock’s cutter suction dredge Carolina deepens the Corpus Christi Ship Channel in Texas.

Pine Bluff Sand & Gravel’s dustpan dredge Wallace McGeorge dredges the Port of Baton Rouge in Louisiana.

Manson Construction’s hopper dredge Glenn Edwards

Ryba Marine Construction’s clamshell dredge performs maintenance dredging in Rochester Harbor, Michigan.
SECTION 7:
PIPELINE INCIDENT PREVENTION TIMELINE
(FOR DREDGING AND PIPELINE COMPANIES)

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 a project RFP.
- If available, request a Survey Ticket through the state 811 one call center.
- Obtain as-built data from the pipeline company or available pipeline data from the USACE Project Manager or Quality Assurance POC for that contract and compare against other resources.
- List all possible pipelines, line size, location, product, and pipeline personnel contact information.

- If there is potential for any dredging or associated activity within 500 ft. of a pipeline, call the pipeline company as soon as possible and explain the project:
  - Ask what agreements (i.e. pipeline crossing agreements), documents, or permits are needed by the pipeline company to work near a pipeline.
  - Document any avoidance measures and recommendations from the pipeline company.
  - Tentatively agree on a pipeline avoidance plan and document it for later use.
7.2 ONE-TWO MONTHS FROM PROJECT START

- Ask the pipeline company for pipeline location data and compare with other sources.
- Ask the pipeline company what other pipelines are in the area and who are the current owners.

7.3 THREE TO FOUR WEEKS FROM PROJECT START

- Bid project with known pipeline considerations.
- A physical pipeline survey may need to be conducted during this time.
- Invite pipeline companies to planning meetings.

7.4 TWO WEEKS FROM PROJECT START

- Make the 811 One Call Notification at least 7 business days prior to commencing work. (811 One Call Notifications should be made for each option awarded in a multi-option contract.)
- 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 will start the process of marking pipelines and provide pipeline locations.
- Verify pipeline crossing agreements have been completed by both parties.
- Confirm if a pipeline company representative will be onsite as work is executed and is able to shutoff flow to any pipelines if necessary.
ONE WEEK FROM PROJECT START—APPENDIX I (HAZARD MITIGATION CHECKLIST)

• Confirm 811 One Call Notification was made and covers all areas of the worksite. (Confirm an additional notification was made for each option awarded in a multi-option contract.)

• Confirm a response was received from the pipeline company(ies).

• Verify all pipelines have been properly surveyed and marked.

• Verify the dredge captain and onsite personnel have an updated list of all pipeline contacts, including roles and responsibilities, and keep it readily available.

• View the most recent NOAA ENC® with an electronic chart system (ECS) during planning, navigation and dredging operations.

• Verify all known pipeline locations and maps are uploaded into onboard navigation guidance software of all floating plant, especially dredges.

• Verify all known pipeline locations are identified in the onboard dredge plan.

• Verify a pipeline company representative will be onsite before work begins.

• Review tolerance zone distances ("No Go Zones") around each pipeline and confirm they are agreed to by the pipeline operator and dredger.

• Verify the dredged material placement sites, heavy equipment, and discharge pipe activity have same pipeline avoidance measures in place.

• Confirm that the pipeline crossing schedule, spud plans, safe mooring and anchor locations for barges, tugs, and support vessels are agreed to by all parties.

• Review water depths vs. drafts for all vessels to ensure safe passage over pipelines - 3 feet of clearance is recommended.

• Discuss updates and concerns from previous days regarding the pipelines.

• Conduct walk-arounds during dredging and spudding activities to identify signs of a pipeline leak – bubbles, rainbow sheen, hydrocarbon smell.

• Identify other mariners working in the area who could help in an emergency.

• Review emergency response and evacuation procedures.

• Always assume a pipeline is active.

• Be aware of possible unknown pipelines.

• Get started and have a safe project!

7.5

The Dutra Group is ready for a safe project.
## APPENDIX I
HAZARD MITIGATION CHECKLIST
FOR SAFE DREDGING NEAR UNDERWATER GAS & HAZARDOUS LIQUID PIPELINES

### SEE SOMETHING • SAY SOMETHING • ACT

(Review at pre-job, toolbox, shift change, and daily safety meetings.)

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<tr>
<td><strong>Confirm 811 One Call Notification was made and covers all areas of worksite. (Confirm an additional notification was made for each option awarded in a multi-option contract.)</strong></td>
<td><strong>Verify dredged material placement sites, heavy equipment, and discharge pipe activity have same pipeline avoidance measures in place.</strong></td>
</tr>
<tr>
<td><strong>Confirm a response was received from pipeline company(ies).</strong></td>
<td><strong>Confirm pipeline crossing schedule, spud plans, safe mooring and anchor locations for barges, tugs, and support vessels are agreed to by all parties.</strong></td>
</tr>
<tr>
<td><strong>Verify all pipelines have been properly surveyed and marked.</strong></td>
<td><strong>Review water depths vs. drafts for all vessels to ensure safe passage over pipelines — 3 ft. of clearance is recommended.</strong></td>
</tr>
<tr>
<td><strong>View most recent NOAA ENC® with an electronic chart system (ECS) during planning, navigation and dredging operations.</strong></td>
<td><strong>Discuss updates and concerns from previous days regarding the pipelines.</strong></td>
</tr>
<tr>
<td><strong>Verify all known pipeline locations and maps are uploaded into onboard navigation guidance software of all floating plant, especially dredges.</strong></td>
<td><strong>Conduct walk-arounds during dredging and spudding activities to identify signs of a pipeline leak – bubbles, rainbow sheen, hydrocarbon smell.</strong></td>
</tr>
<tr>
<td><strong>Verify all known pipeline locations are identified in onboard dredge plan.</strong></td>
<td><strong>Identify other mariners working in area who could help in emergency.</strong></td>
</tr>
<tr>
<td><strong>Verify a pipeline company representative will be onsite before work begins.</strong></td>
<td><strong>Review emergency response and evacuation procedures.</strong></td>
</tr>
<tr>
<td><strong>Review tolerance zone distances (‘No Go Zones’) around each pipeline and confirm they are agreed to by pipeline operator and dredger.</strong></td>
<td><strong>Always assume a pipeline is active.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Be aware of possible unknown pipelines.</strong></td>
</tr>
</tbody>
</table>
**APPENDIX I**  
**HAZARD MITIGATION CHECKLIST**

**EMERGENCY**  
**ACT IMMEDIATELY IF A PIPELINE STRIKE IS SUSPECTED**

**SHUTDOWN • 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 all possible ignition sources: motors, generators, lights, etc.**
3. ** Account for all crewmembers & communicate hazards to them.**
4. ** Call 911 (required), Channel 16, or U.S. Coast Guard & describe your location.**
5. ** If possible, drift out of area before starting an ignition source.**
6. ** Evacuate vessel if needed.**
7. ** Contact pipeline company emergency number in your plan to shut down the line.**
8. ** If you see a pipeline sign nearby, call emergency number listed.**
9. ** Notify U.S. Coast Guard and National Response Center (800)-424-8802.**
10. ** Call 911 again to update emergency responders on situation.**
11. ** Check state laws for other entities you must notify.**
12. ** Notify USACE Quality Assurance POC, Safety POC, or Project Manager on the contract.**

This recommended hazard mitigation checklist promotes safe dredging and marine construction operations near underwater gas and hazardous liquid pipelines located in U.S. Army Corps of Engineers federal navigation channels. It was developed by the Council for Dredging and Marine Construction Safety (CDMCS) in consultation with professionals working in and regulating the dredging and pipeline industries. It does not replace or override any individual entity’s health, safety, and environmental protocols. It is a general recommendation on suggested considerations in the dredging and marine construction industry. It does not create an obligation or requirement on any private sector company or public or government entity. All users 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) applicable local laws, regulations and ordinances. It is not a substitute for any employer or industry practice; nor does it supersede any applicable local state or federal law, regulation, ordinance or policy. The CDMCS and its members shall be held harmless from any interpretation or application of the information contained herein.
### APPENDIX II

#### FEDERAL & REGIONAL CONTACTS

**PIPELINE & HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA)** – www.phmsa.dot.gov

- **Regional Offices**
  www.phmsa.dot.gov/about-phmsa/offices

- **National Pipeline Mapping System (NPMS)**
  www.npms.phmsa.dot.gov

  To locate gas transmission and hazardous liquid pipelines regulated by PHMSA

**U.S. ARMY CORP OF ENGINEERS (USACE)** – www.usace.army.mil/locations

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

- **BOEM Maps for pipelines, platforms and wells in federal waters**
  www.boem.gov/Maps-and-GIS-Data

**BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT (BSEE)** – www.bsee.gov

- **BSEE Offshore Data Center for pipelines, platforms and wells in federal waters**
  www.data.bsee.gov

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) – OFFICE OF COAST SURVEY**

- **Navigation Services Division Regional Managers**
  www.nauticalcharts.noaa.gov/customer-service/regional-managers/index.html

- **Electronic Navigation Charts (ENCs)**
  www.charts.noaa.gov/InteractiveCatalog/nrc.shtml

- **Learn more and read the ENC Tutorial**

**COUNCIL FOR DREDGING AND MARINE CONSTRUCTION SAFETY (CDMCS) PIPELINE TASK FORCE** – www.cdmcs.org

A joint inter-agency, public-private initiative focused on ensuring safe dredging operations in ports and waterways with underwater gas and hazardous liquid pipelines through enhanced communication, collaboration, and exchange of best practices.
STATE CONTACTS

ALABAMA

ALABAMA PUBLIC SERVICE COMMISSION – www.psc.state.al.us

Gas Pipeline Safety Division - (334) 242-5778
Regulates all intrastate gas and hazardous liquid pipelines in AL. www.psc.alabama.gov/Energy/gps/gas_pipeline_safety_section.htm

PHMSA

Southern Region Office - (404) 832-1147
Responsible for regulating all interstate gas and hazardous liquid pipelines in AL

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT – www.adem.state.al.us

Permits & Services Division - (334) 271-7714

U.S. ARMY CORP OF ENGINEERS (MOBILE DISTRICT) – www.sam.usace.army.mil

Navigation Division - (251) 690-2570
Regulatory Division - (251) 690-2658
Engineering Division - (251) 690-2611
Contracting Division - (251) 441-6501

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

Gulf of Mexico OCS Region & Atlantic OCS Region – 1-800-200-4853

ALABAMA 811 – www.al811.com

Dial 811 or 1-800-292-8525

GULFSAFE – www.gulfsafe.org

1-888-910-4853

CALIFORNIA

CALIFORNIA PUBLIC UTILITIES COMMISSION – www.cpuc.ca.gov/pipeline_safety/

Pipeline Safety Division - (415) 703-2214
Responsible for regulating all intrastate gas pipelines in CA


Pipeline Safety Division - (562) 497-0355
Responsible for regulating all intrastate hazardous liquid pipelines in CA
DELAWARE

DELAWARE PUBLIC SERVICE COMMISSION - www.depsc.delaware.gov/natural-gas-regulation/

Pipeline Safety Division - (302) 736-7526
Responsible for regulating all intrastate gas pipelines in DE

PHMSA

Eastern Region Office - (609) 771-7800
Responsible for regulating all interstate gas and interstate and intrastate hazardous liquid pipelines in DE

U.S. ARMY CORPS OF ENGINEERS (PHILADELPHIA DISTRICT) - www.nap.usace.army.mil

Regulatory Division - (215) 656-6728
Contracting Division - (215) 656-6772

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

Gulf of Mexico OCS Region & Atlantic OCS Region - 1-800-200-4853

DELAWARE ONE CALL - www.missutility.net/delaware
Dial 811 or 1-800-282-8555

FLORIDA

FLORIDA PUBLIC SERVICE COMMISSION (FL PSC) - www.psc.state.fl.us
(850) 413-6582
Responsible for regulating all intrastate gas pipelines in FL

PHMSA

Southern Region Office - (404) 832-1147
Responsible for regulating all interstate gas and hazardous liquid pipelines in FL

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FL DEP) - www.floridadep.gov/districts

Permits Division - (850) 245-2036

U.S. ARMY CORPS OF ENGINEERS (JACKSONVILLE DISTRICT) - www.saj.usace.army.mil

Navigation Division - (904) 232-2042
Regulatory Division - (904) 232-1177

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

Gulf of Mexico OCS Region & Atlantic OCS Region - 1-800-200-4853
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<thead>
<tr>
<th><strong>FLORIDA ONE CALL (SUNSHINE 811)</strong> - <a href="http://www.sunshine811.com">www.sunshine811.com</a></th>
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<tr>
<td>Dial 811 or 1-800-432-4770</td>
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<th><strong>GULFSAFE</strong> - <a href="http://www.gulfsafe.org">www.gulfsafe.org</a></th>
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<tr>
<td>1-888-910-4853</td>
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<th><strong>GEORGIA</strong></th>
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<tr>
<td><strong>GEORGIA PUBLIC SERVICE COMMISSION</strong> - <a href="http://www.psc.ga.gov/facilities-protection/pipeline-safety/">www.psc.ga.gov/facilities-protection/pipeline-safety/</a></td>
</tr>
<tr>
<td>Pipeline Safety Division - (404) 463-2765</td>
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<tr>
<td>Responsible for regulating all intrastate gas pipelines in GA</td>
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<tr>
<td>Southern Region Office - (404) 832-1147</td>
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<tr>
<td>Responsible for regulating all interstate gas and interstate &amp; intrastate hazardous liquid pipelines in GA</td>
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<tr>
<th><strong>U.S. ARMY CORPS OF ENGINEERS (SAVANNAH DISTRICT)</strong> - <a href="http://www.sas.usace.army.mil">www.sas.usace.army.mil</a></th>
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<tr>
<td>Navigation Division - (912) 652-5061</td>
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<tr>
<td>Regulatory Division - (800) 448-2402</td>
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<tr>
<td>Engineering Division - (912) 652-5703</td>
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<td>Contracting Division - (912) 652-5291</td>
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<tr>
<th><strong>BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM)</strong> - <a href="http://www.boem.gov">www.boem.gov</a></th>
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<td>Gulf of Mexico OCS Region &amp; Atlantic OCS Region - 1-800-200-4853</td>
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<th><strong>GEORGIA ONE CALL</strong> - <a href="http://www.georgia811.com">www.georgia811.com</a></th>
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<tr>
<td>Dial 811 or 1-800-282-7411 or (770) 623-4332 (local)</td>
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<th><strong>LOUISIANA</strong></th>
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<td><strong>SONRIS</strong> - <a href="http://www.dnr.louisiana.gov">www.dnr.louisiana.gov</a></td>
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<tr>
<td>The State of Louisiana’s database for locating pipelines/flowlines, platforms, wells, and other buried utilities in the Louisiana Coastal Zone.</td>
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<th><strong>PHMSA</strong></th>
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<tr>
<td>Southwest Region Office - (713) 272-2859</td>
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<tr>
<td>Responsible for regulating all interstate gas and hazardous liquid pipelines in LA</td>
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<th><strong>Louisiana Office of Conservation</strong> - <a href="http://www.dnr.louisiana.gov/index.cfm/page/46">www.dnr.louisiana.gov/index.cfm/page/46</a></th>
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<tr>
<td>Pipeline Division - (225) 342-5505</td>
</tr>
<tr>
<td>Responsible for regulating all intrastate gas and hazardous liquid pipelines in LA</td>
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<tr>
<td>Engineering Division - (225) 342-6986</td>
</tr>
<tr>
<td>Responsible for regulating well sites, platforms, production lines and production equipment in LA</td>
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<tr>
<td>U.S. ARMY CORPS OF ENGINEERS (SAVANNAH DISTRICT) - <a href="http://www.sas.usace.army.mil">www.sas.usace.army.mil</a></td>
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<tr>
<td>Navigation Division - (912) 652-5061</td>
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<td>Engineering Division - (912) 652-5703</td>
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<td>Contracting Division - (912) 652-5291</td>
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NEW JERSEY

NEW JERSEY BOARD OF PUBLIC UTILITIES -
www.nj.gov/bpu/about/divisions/reliability/

Bureau of Pipeline Safety -
(609) 341-2865
Responsible for regulating all intrastate gas pipelines in NJ

PHMSA

Eastern Region Office - (609) 771-7800
Responsible for regulating all interstate gas and interstate and intrastate hazardous liquid pipelines in NJ

U.S. ARMY CORPS OF ENGINEERS (PHILADELPHIA DISTRICT) -
www.nap.usace.army.mil

Regulatory Division - (215) 656-6728
Contracting Division - (215) 656-6772

NEW YORK

NEW YORK STATE DEPARTMENT OF PUBLIC SERVICE -
www3.dps.ny.gov/W/PSCWeb.nsf/All/4606B847387FBC-B6852580A700678AD0?
OpenDocument

Pipeline Safety Division - (518) 474-5453
Responsible for regulating all intrastate gas and hazardous liquid pipelines in NY

PHMSA

Eastern Region Office - (609) 771-7800
Responsible for regulating all interstate gas and hazardous liquid pipelines in NY
U.S. ARMY CORPS OF ENGINEERS (NEW YORK DISTRICT) –
www.nan.usace.army.mil

Operations Divisions - (917) 790-8400
Construction Division - (917) 790-8471
Engineering Division - (917) 790-8300
Contracting Division - (917) 790-8070

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

Gulf of Mexico OCS Region & Atlantic OCS Region - 1-800-200-4853

NEW YORK ONE CALL –
www.newyork-811.com

NY One Call is for the following counties: Bronx, Kings, New York, Richmond, Queens, Nassau & Suffolk.
Dial 811 or 1-800-272-4480 or (631) 778-8111 (local)

DIG SAFELY NEW YORK –
www.digsafelynewyork.com

Dig Safely New York is for all other counties in NY. Dial 811 or 1-800-962-7962 or (315) 437-7394 (local)

NORTH CAROLINA

NORTH CAROLINA UTILITIES COMMISSION –
www.ncuc.net/Industries/naturalgas/pipelinesafety.html

Pipeline Safety Division - (919) 733-6000
Responsible for regulating all intrastate gas pipelines in NC

PHMSA

Southern Region Office - (404) 832-1147
Responsible for regulating all interstate gas and interstate & intrastate hazardous liquid pipelines in NC

U.S. ARMY CORPS OF ENGINEERS (WILMINGTON DISTRICT) –
www.saw.usace.army.mil

Regulatory Division - (910) 251-4633
Contracting Division - (910) 251-4884

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

Gulf of Mexico OCS Region & Atlantic OCS Region - 1-800-200-4853

NORTH CAROLINA ONE CALL –
www.nc811.org

Dial 811 or 1-800-632-4949 or (336) 855-5760 (local)
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<th><strong>OREGON</strong></th>
<th><strong>RHODE ISLAND</strong></th>
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<tr>
<td><strong>Pipeline Safety Division -</strong> (503) 378-6115 Responsible for regulating all intrastate gas pipelines in OR</td>
<td><strong>Pipeline Safety -</strong> (401) 780-2123 Responsible for regulating all intrastate gas pipelines in RI</td>
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<td><strong>PHMSA</strong></td>
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<td><strong>Western Region Office -</strong> (720) 963-3160 Responsible for regulating all interstate gas and interstate &amp; intrastate hazardous liquid pipelines in OR</td>
<td><strong>Eastern Region Office -</strong> (609) 771-7800 Responsible for regulating all interstate gas and interstate and intrastate hazardous liquid pipelines in RI</td>
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<tr>
<td>Navigation Division - (503) 808-4364 Regulatory Division - (503) 808-4373 Engineering Division - (503) 808-4703 Contracting Division - (503) 808-4620</td>
<td>Navigation Division - (978) 318-8603 Regulatory Division - (978) 318-8338 Engineering Division - (978) 318-8627 Contracting Division - (978) 318-8159</td>
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<td>Pacific Region - (805) 384-6316</td>
<td>Gulf of Mexico OCS Region &amp; Atlantic OCS Region - 1-800-200-4853</td>
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<td><strong>OREGON UTILITY NOTIFICATION CENTER</strong> – <a href="http://www.digsafelyoregon.com">www.digsafelyoregon.com</a></td>
<td><strong>RHODE ISLAND ONE CALL</strong> – <a href="http://www.digsafe.com">www.digsafe.com</a></td>
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<tr>
<td>Dial 811 or 1-800-332-2344</td>
<td>Dial 811 or 1-888-344-7233 or (781) 569-4603 (local)</td>
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<tr>
<td><strong>TEXAS GENERAL LAND OFFICE</strong></td>
<td><a href="http://www.glo.texas.gov">www.glo.texas.gov</a></td>
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<tr>
<td>1-800-998-4456</td>
<td>Issues commercial leases and easements for coastal projects</td>
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<tr>
<td>Dial 811 or 1-800-344-8377</td>
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<tr>
<td>1-888-910-4853</td>
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<tr>
<th><strong>VA STATE CORPORATION COMMISSION</strong></th>
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<tr>
<td>Pipeline Safety Division</td>
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<tr>
<td>Responsible for regulating all intrastate gas and hazardous liquid pipelines in VA</td>
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<tr>
<th><strong>VIRGINIA ONE CALL</strong></th>
<th><a href="http://www.va811.com">www.va811.com</a></th>
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<tr>
<td>Dial 811 or 1-800-552-3120</td>
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WASHINGTON STATE

WASHINGTON UTILITIES & TRANSPORTATION COMMISSION –
www.utc.wa.gov

Pipeline Safety Division – (360) 664-1160
Responsible for safety regulation of all intrastate gas and hazardous liquid pipelines

PHMSA

Western Region Office – (720) 963-3160
Responsible for regulating all interstate gas and hazardous liquid pipelines in WA

WASHINGTON DEPARTMENT OF ECOLOGY –
www.ecology.wa.gov

(360) 407-6000
Responsible for spill prevention, preparedness and response program

U.S. ARMY CORPS OF ENGINEERS
(SEATTLE DISTRICT) –
www.nws.usace.army.mil

Construction Division - (206) 764-6767
Regulatory Division – (206) 764-3495
Engineering Division – (206) 764-3777
Contracting Division – (206) 764-6692

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

Pacific Region - 1-855-320-1484

COAST GUARD DISTRICT 13 –
www.pacificarea.uscg.mil/our-organization/district-13

1-800-982-8813

WASHINGTON STATE ONE CALL –
www.washington811.com

Dial 811