



Gulfstream has prepared this fact sheet as a guide for emergency response officials who may be asked to respond to an incident involving a Gulfstream natural gas pipeline facility. Since emergency response officials may arrive at the scene of a pipeline incident before pipeline personnel, you should know in advance what to expect and how to respond to potential hazards that may be present.

For more information about Gulfstream's emergency drills, training, or pipeline location information in your area, contact your local Gulfstream field supervisor.

NATURAL GAS PIPELINES

Gulfstream's transmission pipelines are part of a vast pipeline transportation system sometimes referred to as the "interstate highway" for natural gas. This national network consists of about 206,000 miles of high-strength, large-diameter steel pipe moving huge amounts of natural gas thousands of miles from producing regions to market. You may be more familiar with your local distribution company, or local public utility, which receives its natural gas supply from pipeline operators like Gulfstream.

The transmission pipelines operated by Gulfstream transport far greater volume and operate at much higher pressure than local service lines that feed most homes. The typical pressures found on pipeline systems are:

Gulfstream

- Transmission: High pressure850-2180 psig

Local Utility

- Distribution Main: High pressure60-300 psig
- Distribution Main: Intermediate pressure5-60 psig
- Service Line: Low pressure 1/4 - 5 psig

The transmission pipelines operated by Gulfstream are constructed of high-strength steel ranging in diameter from 12 to 36 inches. Compressor stations, meter stations, mainline valves and smaller facilities support the transmission system.

COMPRESSOR STATIONS

Natural gas is transported through pipelines at high pressure using compression. Compressor stations, located approximately every 60 miles, use large turbines, motors or engines to pressurize the gas and move it through the pipeline.

METER STATIONS

Often referred to as the city gate, a meter station is the point where distribution companies receive custody of the gas from transmission companies. At these locations the operating pressure is reduced and odor is added to the gas. The local gas utility then uses distribution pipes, or mains, to bring natural gas service to homes and businesses.

MAINLINE VALVES

Mainline valves are shut-off devices that are designed to stop the flow of gas through the pipeline. Some are manually operated, while others are either automatic or operated by remote control. Valves can be placed every 5 to 20 miles along the pipeline, and are subject to regulation by federal safety codes. It is important to remember that valves should only be operated by qualified company personnel.

LOCATING PIPELINES

Transmission pipelines follow well-defined easements, many times sharing the same corridor with other utility or power lines. These easements vary in width, generally anywhere from 50 to 175 feet depending on the number of pipelines and terrain.

EMERGENCY CONTACT:

1-800-440-8475

PRODUCTS/DOT GUIDEBOOK ID#/GUIDE#:

Natural Gas 1971 115

FLORIDA

COUNTIES OF OPERATION:

Hardee	Osceola
Highlands	Palm Beach
Manatee	Pinellas
Martin	Polk
Okeechobee	

Changes may occur. Contact the operator to discuss their pipeline systems and areas of operation.

In accordance with federal law, above ground pipeline markers are used to alert excavators of the presence of one or more pipelines within an easement. These markers, which contain the name of the pipeline operator and emergency contact information, are usually located near road, rail, fence, water crossings and curbs. However, these markers do not necessarily represent the exact location of the pipeline facilities within the easement.

To find information about the locations of pipelines operating in your community, visit the National Pipeline Mapping System (NPMS) on the Internet at www.npms.phmsa.dot.gov. NPMS provides a list of pipe-lines, their operator and operator contact information.



ONE-CALL

State law requires advanced notice be given to local one-call centers before digging or excavating. Local one-call centers provide a free service to assist in marking the location of underground pipelines, as well as buried cable, telephone, electric and other utilities. Anyone planning excavation, construction or blasting activities should notify one-call before they begin. Representatives from each company will then visit the proposed work site and mark the location of their facilities to reduce the risk of damage.

To contact the one-call center nearest you, dial the national one-call referral number at 8 -1-1.



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

PROPERTIES OF NATURAL GAS

Before you respond to a pipeline related emergency you should know how natural gas behaves and some of its unique qualities.

Composition – Natural gas is a naturally occurring hydrocarbon mixture. After being processed, it is composed mostly of methane (about 94 percent) and also contains ethane (about 4 percent).

Non-toxic – Natural gas is non-toxic. The fuel is sometimes listed as a “hazardous material” due to its flammability, not due to toxicity.

Lighter than Air – Natural gas is 40 percent lighter than air. When natural gas escapes into an open area, it rises into the air and dissipates, although gas odorant is heavier than air and may still sink to the ground. In an enclosed area, it collects first near the ceiling. Suffocation can occur if natural gas displaces the oxygen in an enclosed area.

Flammable Within Narrow Limits

– Natural gas will ignite only within a narrow range: approximately 3-15 percent gas-to-air mix. Above or below the range combustion will not occur.

Odorless – Natural gas is normally a colorless, odorless substance in its natural state. The smell often associated with natural gas is normally added by the local distribution company.

Heating Value – Natural gas has a heat content of about 1,000 BTU per cubic foot.

Combustion Products – There are no significant releases of harmful compounds as a result of natural gas combustion. However, incomplete combustion may produce carbon monoxide and warrant the use of self-contained breathing apparatuses by emergency response teams.

Ignition Temperature – Natural gas has a very high ignition point, twice as high as that of gasoline. A flame or spark must reach nearly 1200 degrees Fahrenheit to ignite natural gas. However, static electricity, pilot lights, matches and sparks from telephones, electric motors and internal combustion engines can reach this temperature.

POTENTIAL HAZARDOUS CONDITIONS

Due to the large volumes and high pressures, accidents involving natural gas transmission pipelines can be dangerous. There are three primary hazardous conditions you should be aware of:

1) Encroachment. If you notice excavation near a pipeline right of way, check to see if the contractors have notified the company or one-call about their work. Nearly 2/3 of fatalities involving pipelines are due to damage from outside forces.

2) Leaks. Natural gas is normally a colorless, odorless substance. Because natural gas cannot be detected on its own, local utilities add an odorant to help consumers smell gas should a leak occur. However, odorant is added at only certain places along the pipeline, so you may not always be able to detect a leak by smell. Unlike natural gas, odorant is not lighter than air. Therefore, the strong smell of natural gas odorant does not always mean that methane is present. Always use a methane detection instrument to determine if natural gas is present. The following signs can be an indication of a natural gas pipeline leak:

- A hissing sound
- Dust, water, bubbles or vegetation blowing around a pipeline
- Discolored or dead vegetation near a pipeline

- Bubbling in a wet area, marshland, river or creek
- A dry spot in a moist field

If you become aware of a leak, notify the pipeline company immediately. Emergency phone numbers are listed on all pipeline markers.

3) Rupture. A pipeline rupture has much more dramatic indicators. There will be a loud roaring sound of escaping gas. A pipeline rupture does not always lead to a fire, but if it does ignite, it can result in a large flame burning at high temperatures. Fire and emergency officials should be aware of the potential for secondary fires and disturbed earth in the vicinity of a rupture.

WHAT TO DO

Upon the first indication that a natural gas pipeline may be leaking or ruptured, notify the pipeline company immediately. The phone number on the pipeline marker will connect you with the company's 24-hour emergency gas control center. Tell them the location, your name and any other details about the incident. The gas control center will dispatch company representatives to the area where the incident has occurred. While that representative is en route, stay in close contact with the pipeline company. You should also take the following steps:

- Park vehicles a safe distance from the incident and turn off engines as soon as possible.
- Clear area around the site and evacuate people from the area of danger to an upwind location. Protecting people and then property should be your top priority.
- Provide first aid and call for additional emergency medical assistance if needed.
- Barricade area and keep onlookers safe distance away.
- Roads leading to and from the site should be kept clear for emergency and pipeline personnel.

In the case of a fire fed by a leak or rupture, do not try to extinguish the gas fire with water or other chemicals. Even if you were successful, there is a high probability of re-ignition and explosion. The best method to control a gas-fed fire is to stop the flow of gas. However, do not try to operate pipeline valves. Pipeline personnel are trained in the

proper procedures for their operation. Instead, extinguish perimeter fires and wet down exposed flammable areas in the vicinity. Radiant heat from the gas fire is intense and can cover a large area.

Do Not:

- Forget to notify the pipeline company immediately.
- Allow smoking or spark-producing devices if unignited combustible gas is suspected.
- Open a closed pipeline valve at any time.
- Make any effort to extinguish flames of escaping burning gas. Use spray only to protect surrounding exposure.

PIPELINE PERSONNEL

The pipeline personnel you will be working with are trained for pipeline emergencies. They can supply you with information regarding the facilities

involved in the incident, including the number and size of the pipelines in the area, location of valves and operating pressures. Pipeline personnel will also coordinate to set up a command post to act as a central clearinghouse for all emergency information.

The primary job of the pipeline response team is to stop the flow of gas to the accident site. The damaged section is isolated by closing valves on either side of the leak or rupture. Any fire will burn itself out once the fuel is consumed and the remaining gas will be vented to the atmosphere.

COMPRESSOR STATION EMERGENCIES

There is one other type of pipeline emergency that you may be asked to respond to. This involves an accident inside a compressor station. Compressor stations are designed with extensive emergency systems. If there is a leak or rupture, the station will

automatically shut down appropriate equipment and vent gas through relief valves in the station yard.

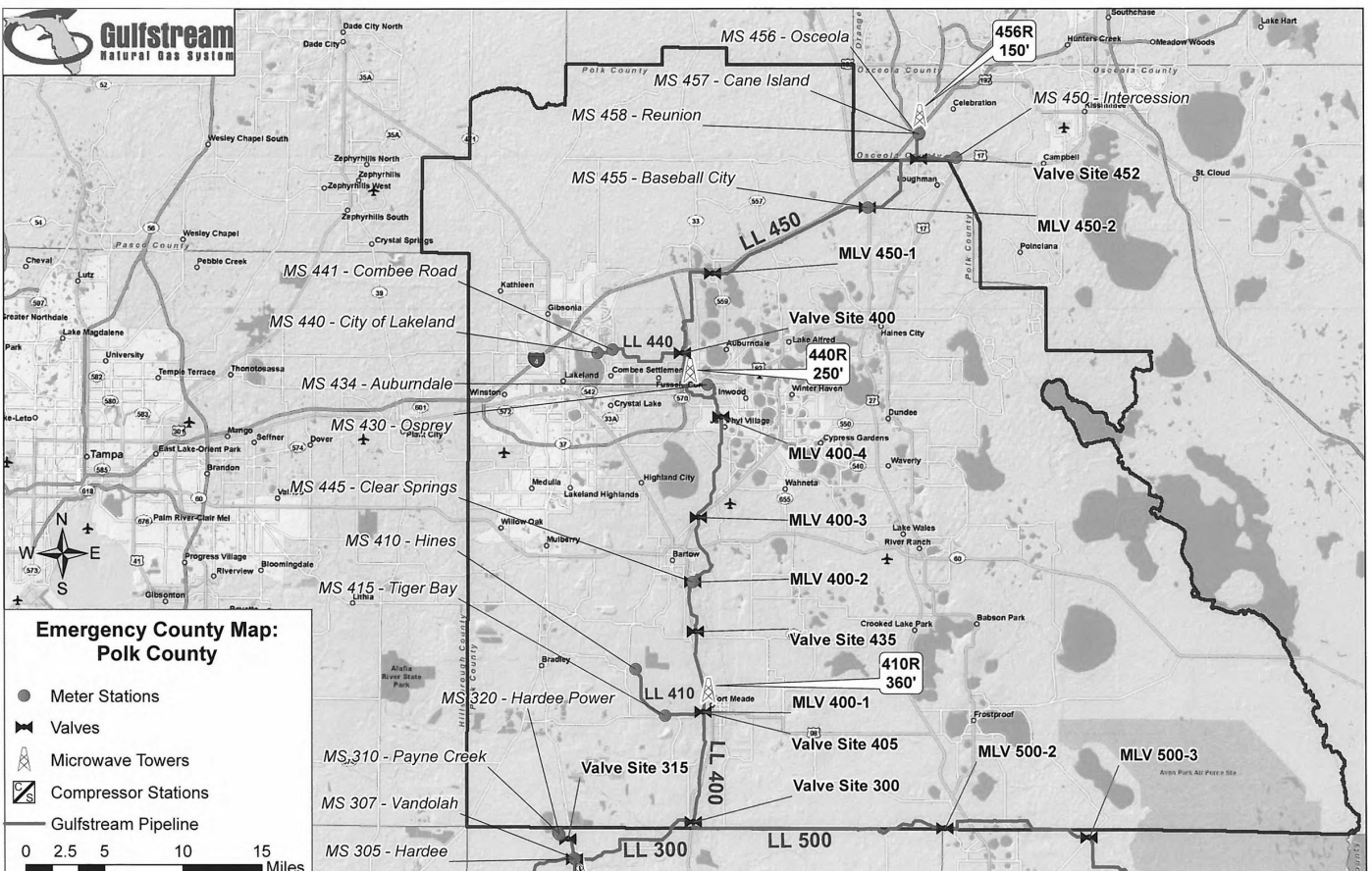
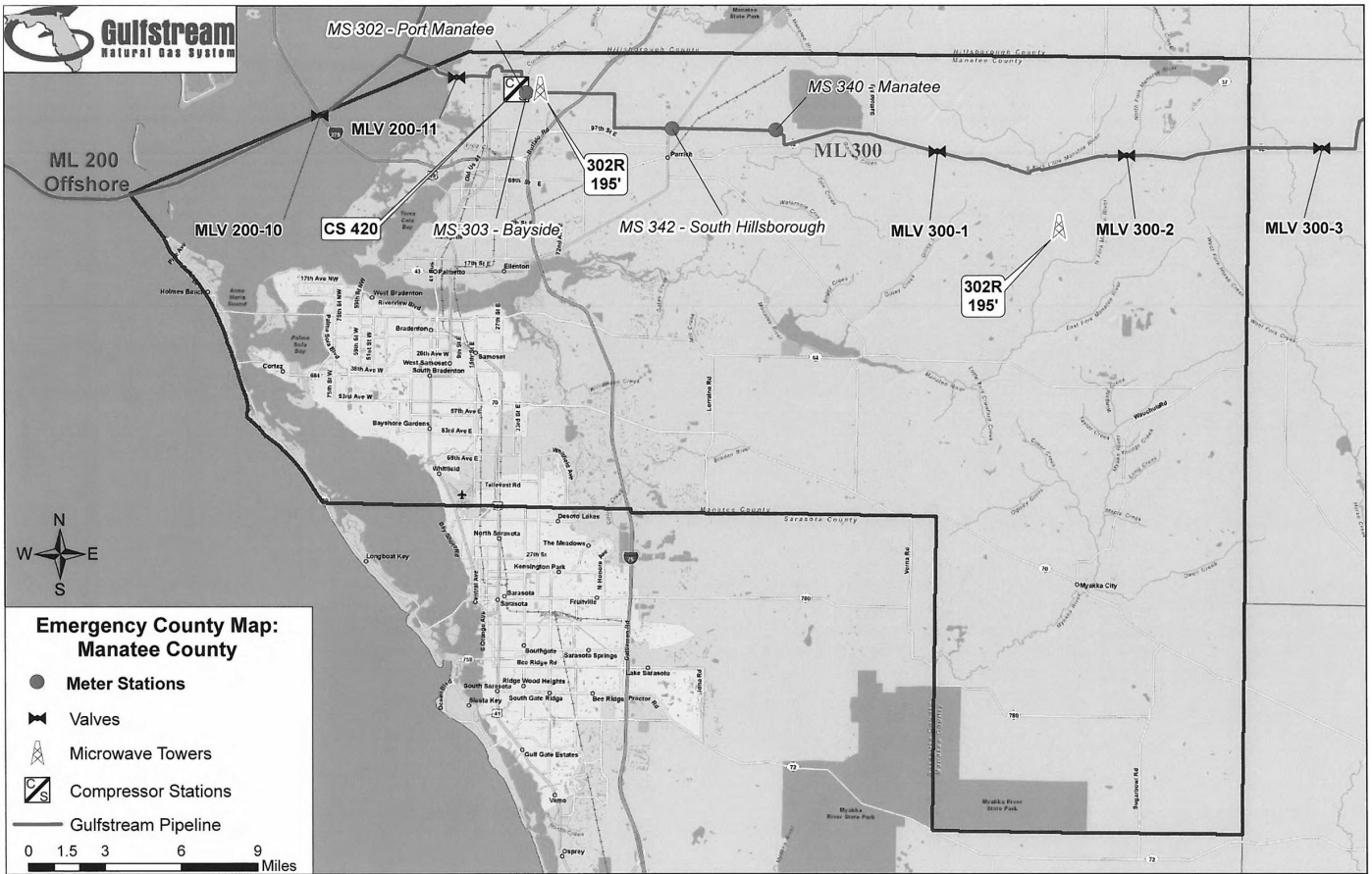
Compressor station employees are also trained to fight minor fires with station extinguishers or fire hoses. Normally in a compressor station incident, emergency response teams would be summoned to offer the following services:

- Traffic or crowd control
- Medical treatment or evacuation
- Fighting any perimeter fires outside the station fence.

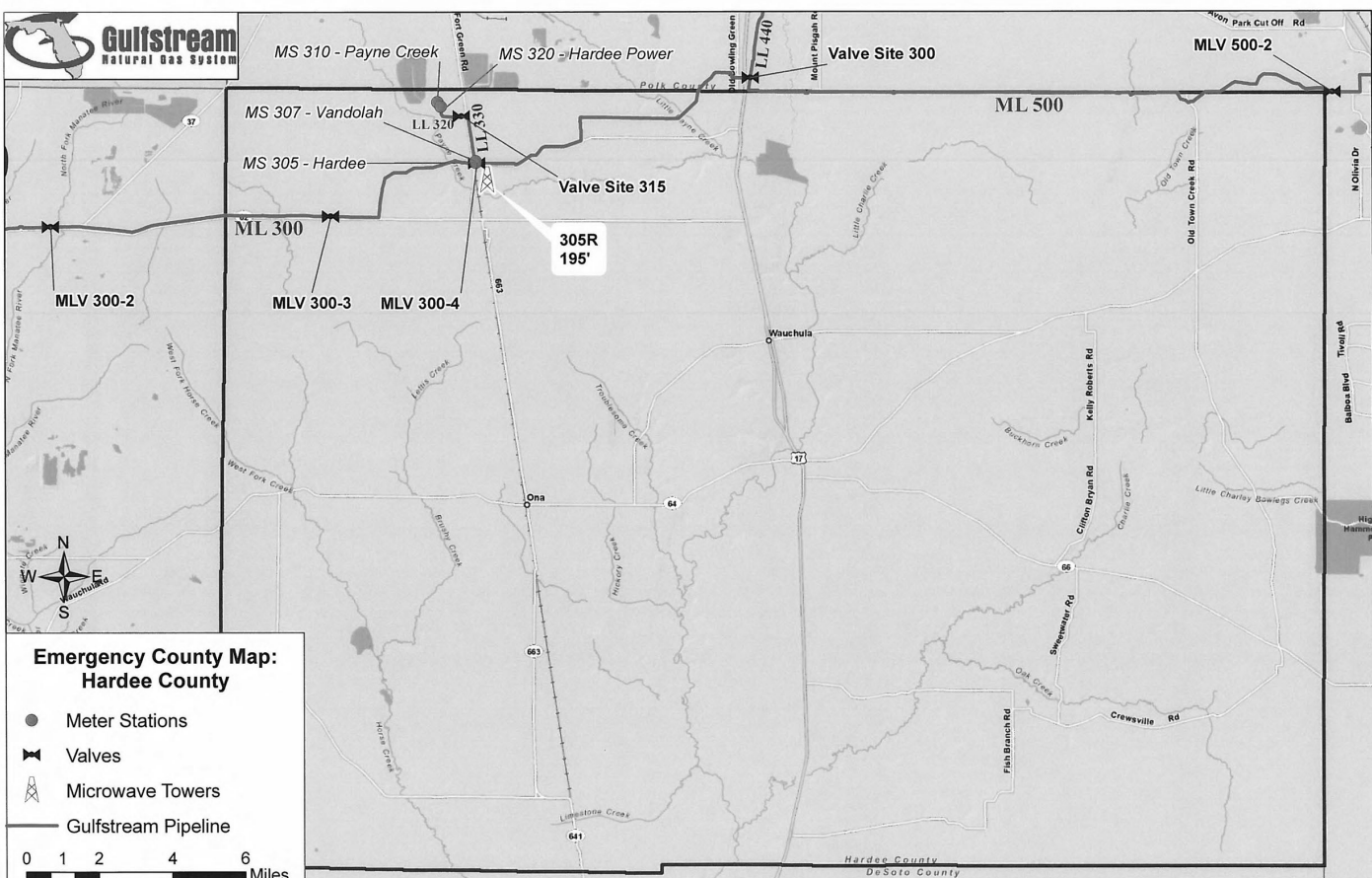
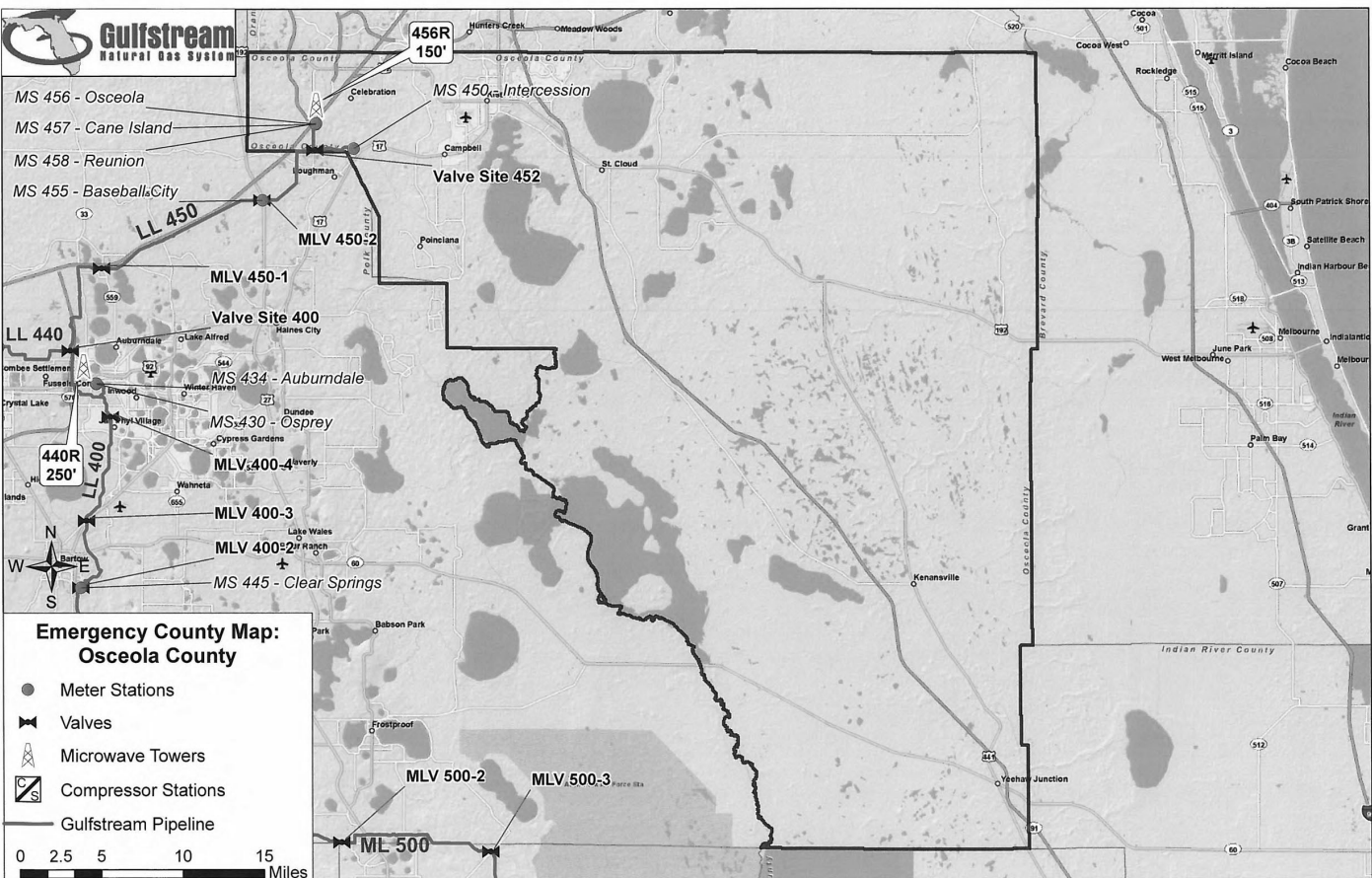
Because compressor stations sometimes store materials that may release toxic or hazardous substances when burned, pipeline emergency response teams can supply a list of and firefighting procedures for all combustible materials on the station property.



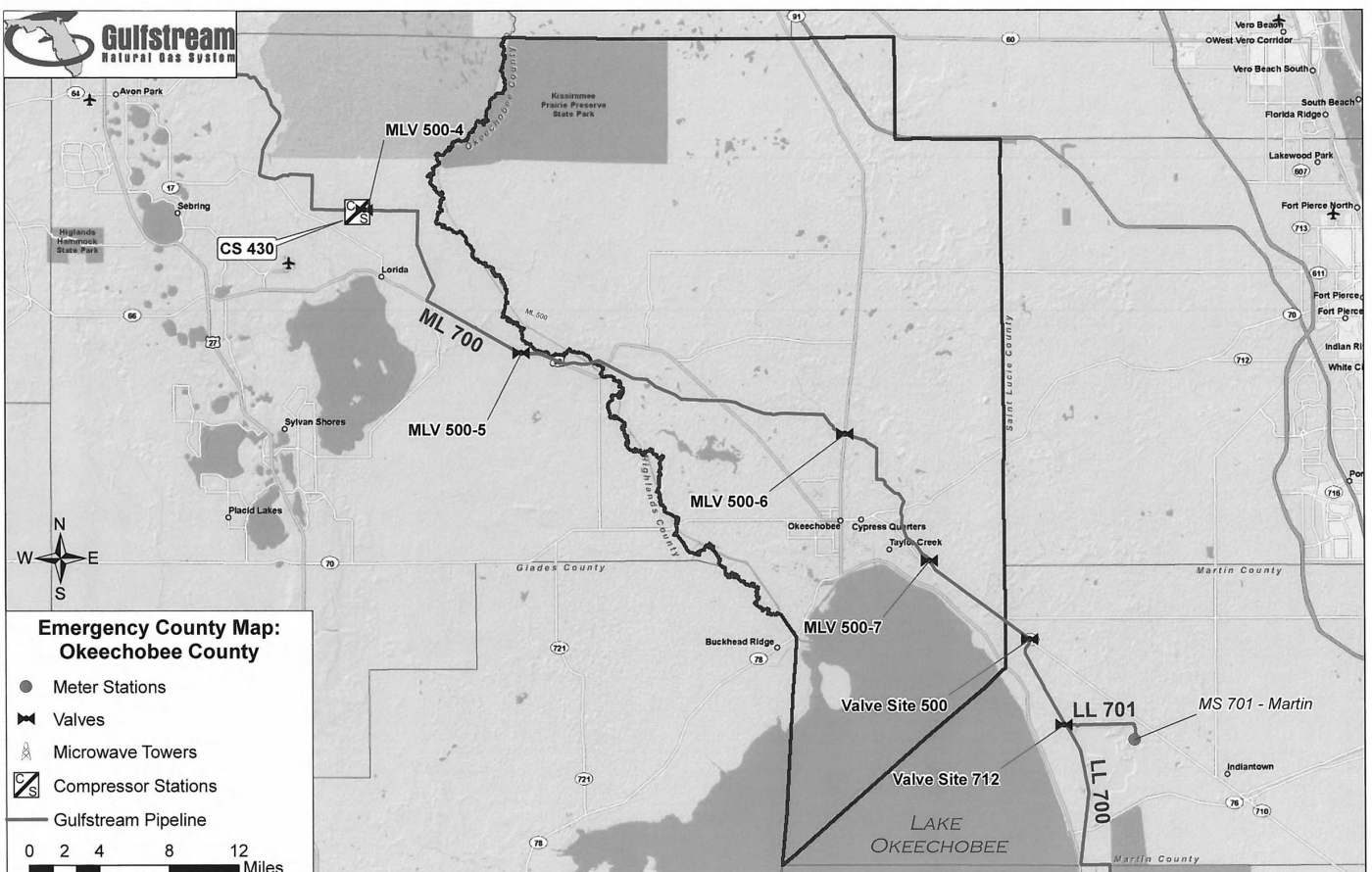
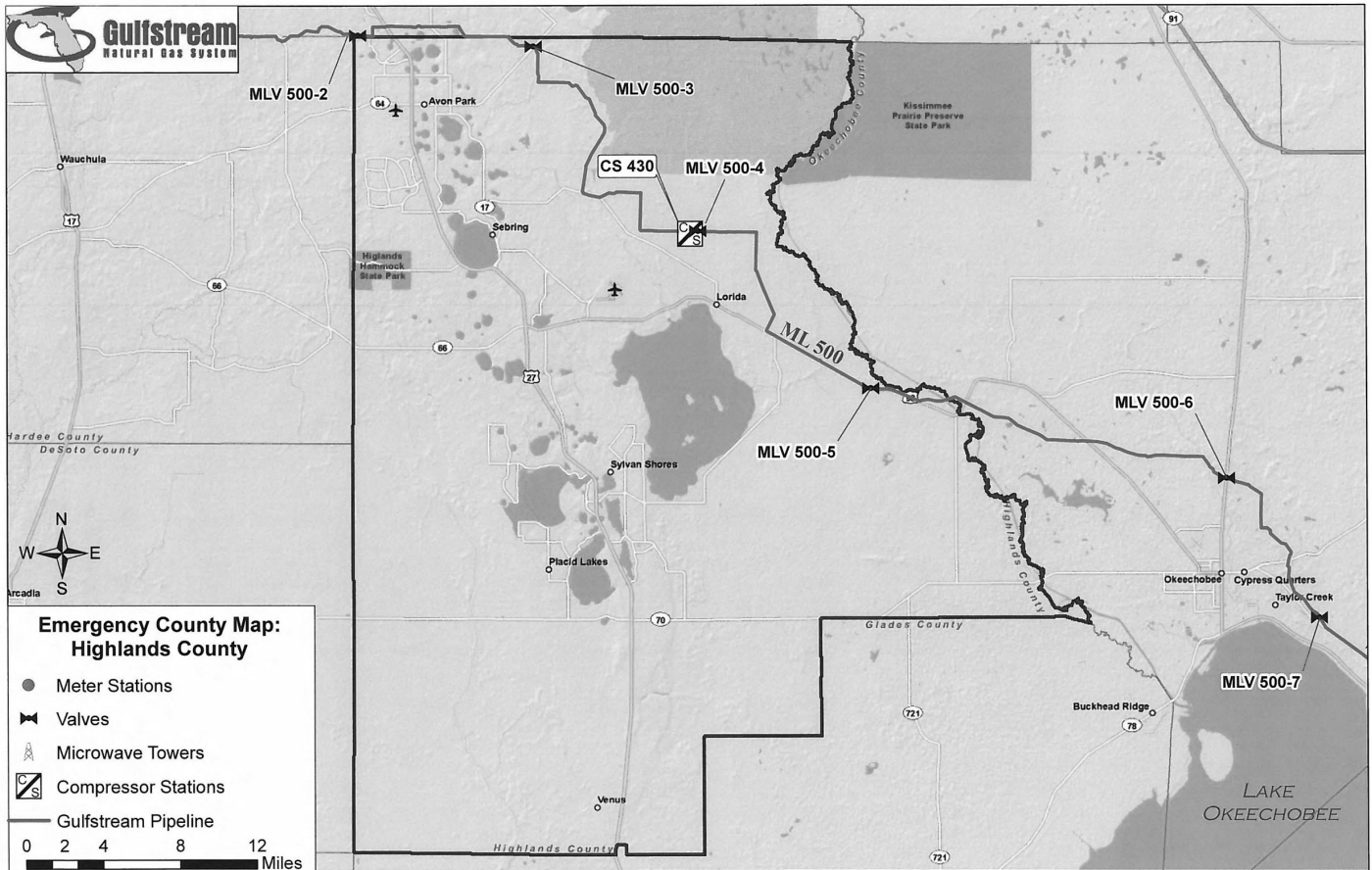
Gulfstream Natural Gas System



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