NEXTDECADE

RIO GRANDE LNG

Liquefied Natural Gas (LNG) Vessel FAQs

LNG Vessels - By the Numbers

- ***How many LNG vessels will be transiting the channel?***
  The construction of the entire Rio Grande LNG terminal will occur over a number of years. Two LNG vessels per week are expected to arrive at the terminal once it begins operations.

- ***What is the size of an LNG vessel?***
  An LNG vessel is roughly the same length as a typical tanker vessel. The beam of a typical LNG vessel is 150 feet. The draft is 39 feet.

- ***What is the typical speed of LNG vessels in the Brownsville Ship Channel?***
  The current speed limit for any vessel in the Brownsville Ship Channel is 8 knots. An LNG vessel will typically travel at a speed of 6-7 knots.

LNG Vessels - Transiting the Channel

- ***What protocols will LNG vessels follow in the Brownsville Ship Channel?***
  All ship traffic, including LNG vessels, are required to follow strict procedures, or "rules of the road", established internationally and overseen by the U.S. Coast Guard (USCG).

  The current practice for all MV Class vessels in the Brownsville Ship Channel, is that, under Pilot order, tugs assist them to safely navigate the Channel. LNG vessels coming to NextDecade's Rio Grande LNG terminal will be treated exactly the same but will have dedicated tugs. Certified pilots from the local Brazos Santiago Pilots will assist in guiding LNG vessels to the berth. Although three tugs are required to maneuver LNG vessels, NextDecade will permanently contract four tugs to ensure redundancy.

The Brazos Santiago Pilots, as well as two tug captains, participated in LNG vessel simulations at the Marine Institute of Technology and Graduate Studies to get virtual experience in safely piloting LNG vessels to NextDecade's Rio Grande LNG terminal. We will continue to use this simulator in the future to train Pilots and tug captains.

Use of the Channel Alongside LNG Vessels

- ***Will there be a buffer or exclusion zone around LNG vessels while in the Brownsville Ship Channel?***
  Currently, U.S. Coast Guard Corpus Christi (they are also responsible for the safety of security of the Brownsville Ship Channel) does not have a requirement for an exclusion zone in the Brownsville Ship Channel, both while the ship is in transit and while at the berth. That said, all vessels in the Brownsville Ship Channel are required to follow strict procedures, or "rules of the road", established internationally and overseen locally by the U.S. Coast Guard (USCG).

- ***How will other vessel traffic in the Brownsville Ship Channel transit the channel?***
  - Deep draft ship traffic – There will be no changes to the existing practice, which is that no two-way traffic is allowed for MV Class vessels in the Brownsville Ship Channel. Therefore, when an LNG vessel is in the Brownsville Ship Channel, deep draft traffic (vessels requiring the depth of the dredged channel) will be restricted to whichever direction that vessel is traveling. The same rule applies to the LNG vessel if another MV Class vessel is already in the Brownsville Ship Channel.
  - Shallower draft ship traffic - Vessels with a shallower draft may, at the Pilot's discretion, pass in either direction as long as they do not interfere with the safe navigation of the LNG vessel.

Liquefied Natural Gas (LNG) Vessel FAQs CONTINUED

Security and Safety

- ***How is the safety of the public near the channel addressed?***
  The U.S. Coast Guard is responsible for the safety and security of all aspects of LNG vessel movement. During the permitting period for the Rio Grande LNG terminal, a Waterway Suitability Assessment study was conducted and completed by NextDecade. The study, which followed strict federal guidelines, assessed both the practical and safety aspects of an LNG vessel using the channel and loading at the terminal. The study was submitted to the U.S. Coast Guard who were satisfied that LNG vessels can operate safely in the channel.

LNG Vessels - Water Quality and Management

- ***Will water quality in the Brownsville Ship Channel be impacted by LNG vessel activity at the Rio Grande LNG terminal?***
  The handling of ballast water (water that balances a cargo vessel during loading and unloading) on all ships is highly regulated. That same regulation and rigor applies to handling of ballast water on LNG vessels.

  Given the relatively small volume of water discharged by LNG vessels when loading at the Rio Grande LNG terminal compared to the total water within the Brownsville Ship Channel, and the very limited temperature difference between that water and the ambient water temperature in the Channel, any impacts on water temperature in the Channel during the LNG loading process will be temporary and extremely minor.

Brazos Island Harbor Channel Improvement Project

- ***How deep is the Brownsville Ship Channel?***
  The Brownsville Ship Channel's current depth is 42 feet. In 2014, the Department of the Army, United States Army Corps of Engineers recommended that the Brownsville Ship Channel be authorized for deepening to 52 feet.

- ***What is the Brazos Island Harbor Channel Improvement project?***
  In 2016, the Brownsville Navigation District (BND) officially received from the U.S. Congress, authorization for the Brazos Island Harbor Channel Improvement project. The BND serves as the non-federal sponsor of the project. The Brazos Island Harbor Channel Improvement Project includes the deepening of the channel from 42 to 52 feet.

- ***What is NextDecade's role in the Brazos Island Harbor Channel Improvement project?***
  In 2019, NextDecade agreed to privately fund a significant portion of the Brazos Island Harbor Channel Improvement project, which will include deepening from the outer jetties to the western end of the Rio Grande LNG property, as well as the development of two-ship berths and a turning basin for the Rio Grande LNG facility. NextDecade will also fund the widening of the Channel bend close to the entrance of the Brownsville Ship Channel to improve navigational safety. These improvements will benefit existing Port of Brownsville tenants and enhance future development of the Port.