



**PORT NOLA**

THE PORT OF NEW ORLEANS

*A Global Reach, A Greener Future*

# Moving LNG Forward in the Port Community

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# Port NOLA Environmental Services

## ***“PORT SETS GREEN GOALS TO ENTICE SHIPPERS”***

- NEW ORLEANS CITYBUSINESS

- ▶ **A commercial imperative** for attracting new business, enhancing existing relationships
- ▶ **Reducing risk**, liability and being a good corporate citizen
- ▶ **Facilitating cost-effective** environmental stewardship for tenants, operators, & carriers



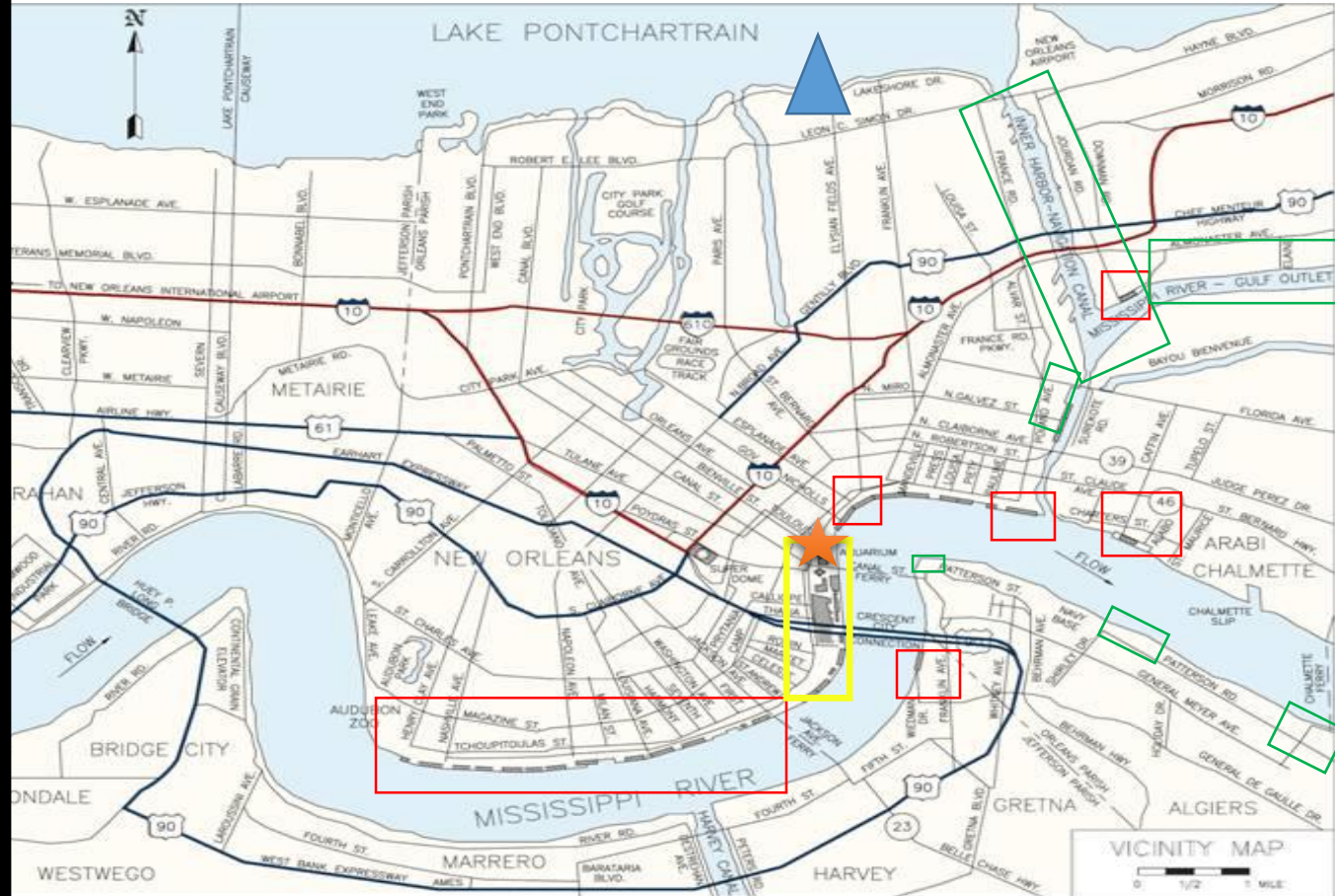
# Port NOLA Existing Facilities & Property

22 million sq-ft of cargo handling area

6 million sq-ft of covered storage

1.7 million sq-ft of people places (cruise, parking, etc.)

65.3 millions sq-ft of industrial properties



20+ Miles of Waterfront



# Superior Intermodal Connectivity



**50 Ocean Carriers,**  
**6 Rail Lines,**  
**16 Barge Lines,**  
**75 Truck Lines**



# 14,5000 Mile Inland Waterway System



Reaches 31 states

3 Canadian Provinces

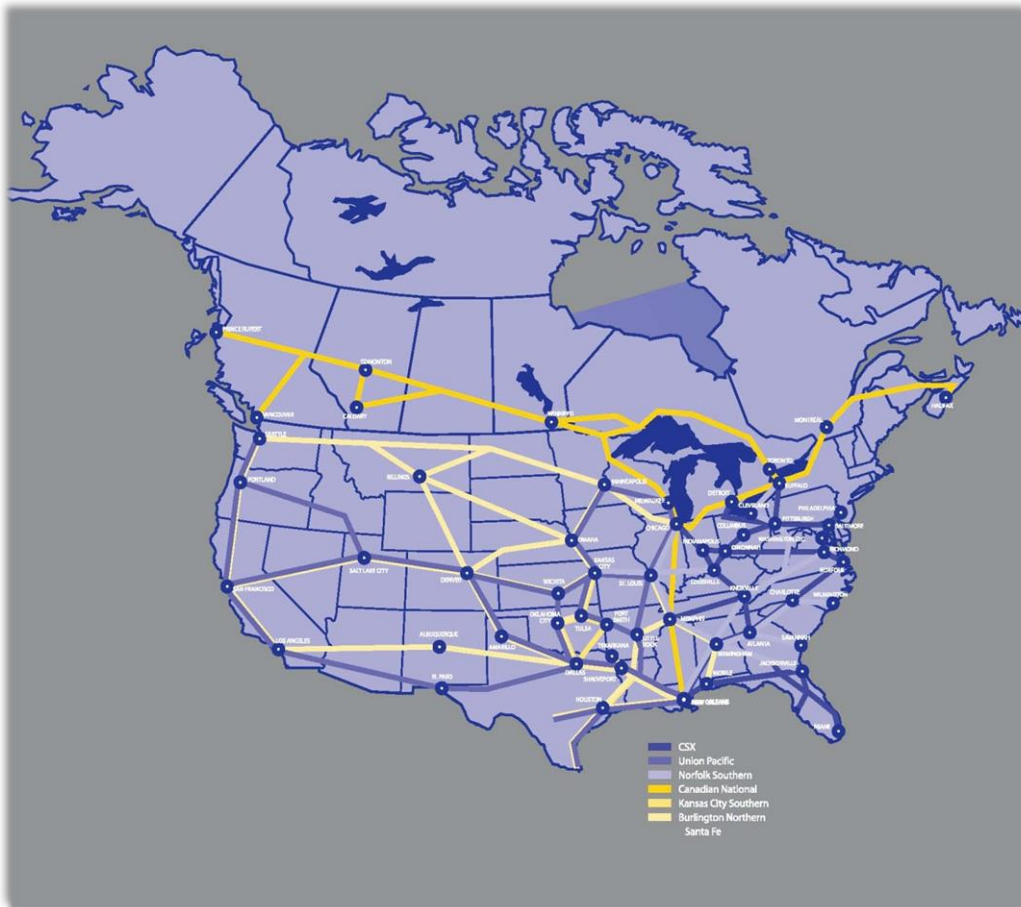
Serves 279 million people\*

500,000 barge movements

\* Includes Rail Service – Source: 2010 U.S. Census



# Direct Rail Access



Only deepwater port to have all six class-one railroads, connected by New Orleans Public Belt:

Burlington Northern/Santa Fe

Canadian National

CSX

Kansas City Southern

Norfolk Southern

Union Pacific



# Louisiana = >\$60B proposed LNG investment

## **Cheniere LNG Export Terminal**

- Sabine Pass \$6 billion export project in construction now

## **Port Fourchon**

- Harvey Gulf International to invest \$400 million in LNG powered offshore support vessels & 2 LNG fueling docks

## **Port of Lake Charles**

- Magnolia LNG to invest \$3.5 billion in new LNG export terminal (in FERC process)

## **Other Proposed Projects:**

- Sasol Gas to Liquid facility at \$21B / 3,300 acre site;
- Sempra LNG Export Terminal \$10B;
- At least two sites proposed for Lower Mississippi River LNG bunkering





# LNG Bunkering Facility in Port Fourchon



*Source: Harvey Gulf International Marine*



# Transitioning to LNG as Maritime Fuel?

- International Maritime Organization (IMO) **global sulphur cap 0.5%** starting in 2020
- LNG contains no sulphur, emits less CO<sub>2</sub>
- LNG Bunkering – taking aboard LNG bunker fuel onto a ship
- Bunkering demand is increasing
- Reduce costs in transit with new infrastructure and standardization of bunkering processes
- Floating Liquefaction Storage and Offloading Vessels (FLSO)



***When and where will LNG be available to our end-users?***



# Ports Surveyed on LNG Bunkering Demand in 2020



Source: Lloyds Register



# Considering LNG for Port NOLA

## ***OPPORTUNITIES***

- JOBS – energy industry and local focus on “emerging environmental technologies”
- Lower emissions in Port and urban areas
- NAAQS and MARPOL drivers
- Marine vessel emission reduction credit banking
- Multi-modal demand hub with Port as facilitating entity

## ***CHALLENGES***

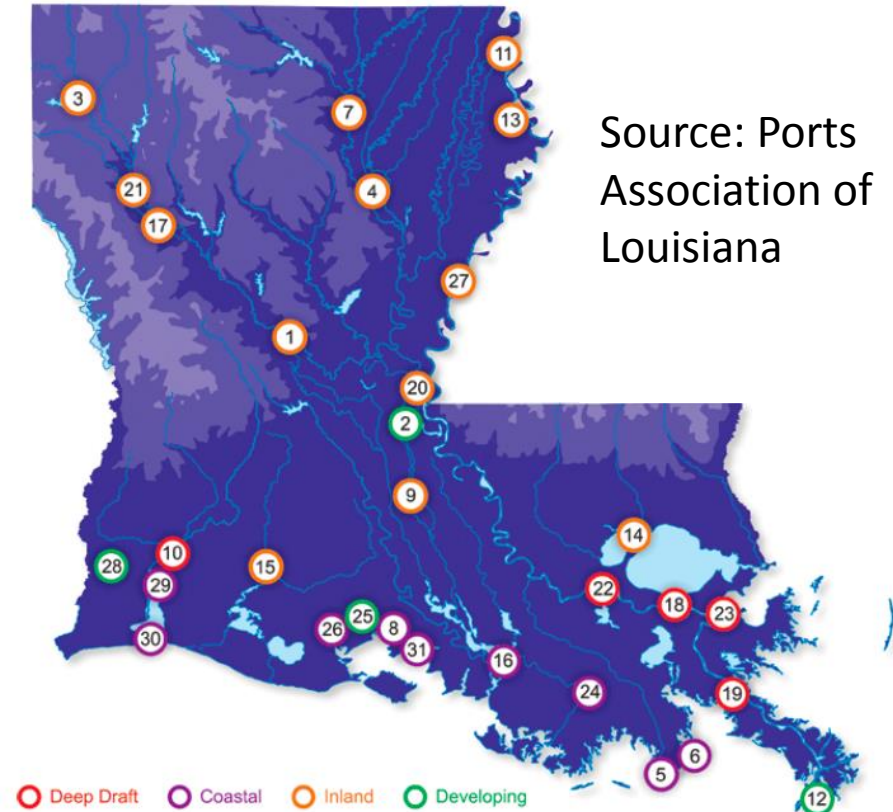
- Real/Perceived safety risks
- Uncertain regulatory future
- Gas leaks during transport and bunkering
- Available, appropriate land uses/zoning, and buffer requirements
- Reliability and resilience



# Questions & Future Research Needed

In partnership with the University of New Orleans Transportation Institute

- Regulation and governance structures
- Infrastructure investments
- Safety policies
- Bunkering procedural training
- Regional impact studies
  - Economic & Environmental
  - LNG Projects in Southern LA
  - Bunkering at the Port of New Orleans





# Thank You



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