National Aeronautics and Space Administration

# Test Support Infrastructure

## Cryogenic Propellant Systems
- Storage, transfer and distribution
- Six 100,000 gallon LOX Barges
- Three 240,000 gallon LH Barges
- Barges available for conversion to other propellants

## High Pressure Industrial Water
- 330,000 gallons per minute
- 66 million gallon reservoir storage capacity

## High Pressure Gas Facility
- Storage and distribution
- Nitrogen, Helium, Hydrogen, Air

## Acoustic Buffer Zone
- Stennis Space Center is surrounded by 125,000 acre noise buffer zone
- Enables uninterrupted testing without disturbing the surrounding communities

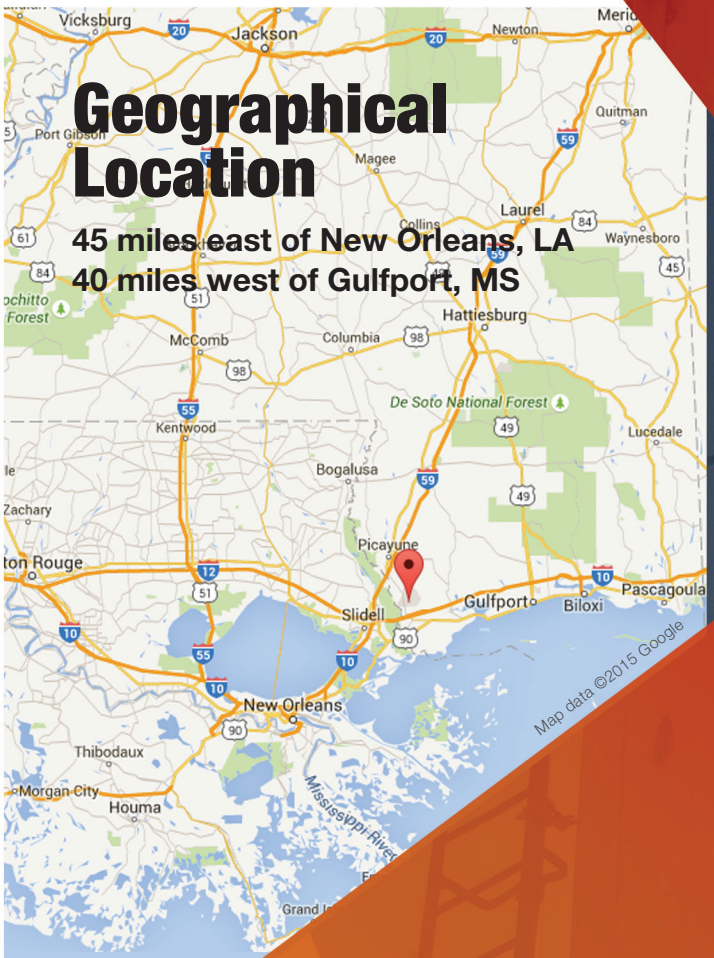
## Waterway Transportation
- 7-1/2 mile canal system connects SSC to the Gulf of Mexico and connected waterways
- Used for delivery of propellants and allows barge transportation of large stages

## Manufacturing & Assembly
- 800,000+ SF available industrial space
- Co-located with test facilities

## Additional Support
- Laboratories
  - Environmental
  - Gas and Material Analysis
  - Measurement Standards and Calibration
- Shops
  - Machine, weld, carpenter, paint, electrical
  - Valve, component cleaning, rework

# Geographical Location

**45 miles east of New Orleans, LA**
**40 miles west of Gulfport, MS**




# AMERICA'S LARGEST ROCKET ENGINE TEST COMPLEX

## Contact Us

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**John C. Stennis Space Center**

# Stennis Space Center

## NASA's Primary Rocket Propulsion Test Center

SSC has many unique test facilities, capabilities, advanced technologies and supporting infrastructure which provides world-class testing services for commercial, government agencies and academia.

> *"At NASA's Stennis Space Center we are excited about the future of Space Flight, leveraging over 50 years of experience and capabilities to ensure your success."*
>
> *— Center Director Rick Gilbrech*

### ROCKET STAGES
Up to 11M lb thrust (designed)
Up to 3M lb thrust (current)

### LIQUID ENGINE SYSTEMS
Up to 1.5M lb thrust (designed)
Up to 650K lb thrust (current)

### COMPONENTS
Injectors, preburners, turbopumps, nozzles, etc.
Up to 1.2M lb thrust (designed)

### SIMULATED ALTITUDE
Passive and active 60,000 ft to 100,000 ft

### TEST ARTICLE ORIENTATION
Vertical Test Positions
Horizontal Test Positions

### PROPELLANTS: FUELS AND OXIDIZERS
Liquid Hydrogen (LH)
Hydrocarbon Fuels
- Liquid Methane (LCH-4)
- Hydrocarbon (RP-1)
- Jet Propellant (JP-8, Jet "A", etc.)
- Isopropyl Alcohol (IPA)

Oxidizers
- Liquid Oxygen (LOX)
- Concentrated Hydrogen Peroxide ($H^2O^2$)

### PROPELLANT RUN TANKS
Up to 9,300 psig
Extended Duration Run Time Available

### PRESSURANT GAS
Up to 15,000 psig
- Gaseous Nitrogen
- Gaseous Helium
- High Pressure Air
- Gaseous Hydrogen

### DATA, INSTRUMENTATION AND VIDEO
Program Logic Controllers (PLC) Control and Operation
Up to 592 Channels Low-Speed Data Per Test Cell
Up To 64 Channels High-Speed Data Per Test Cell
Data Channels "Re-Configurable" Between Test Cells
High Speed Video Available

### 8 TEST STANDS/ 13 TEST POSITIONS