



# LAGNIAPPE

John C. Stennis Space Center

Volume 9 Issue 6

[www.nasa.gov/centers/stennis](http://www.nasa.gov/centers/stennis)

June 2014

## NASA moves ahead toward SLS core stage testing

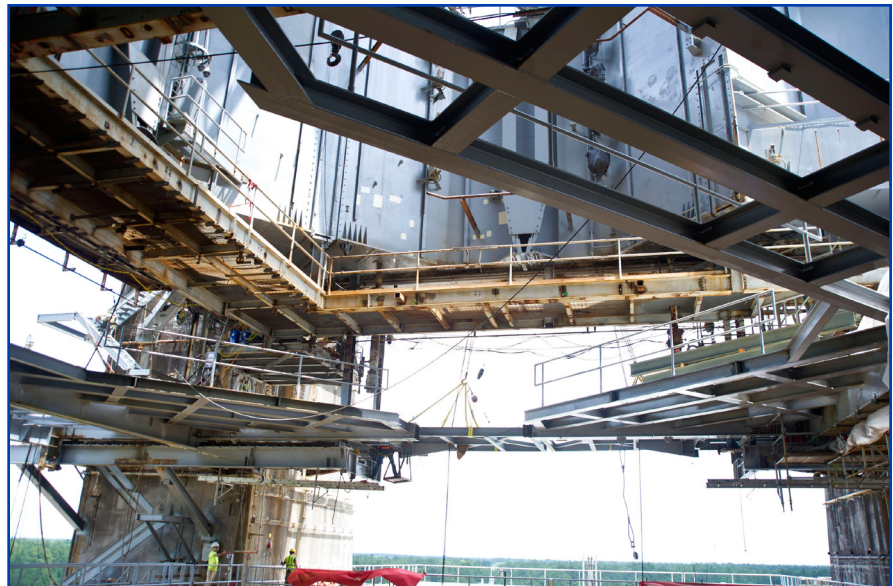
**N**ASA is nearing completion on two major structural restoration construction packages for the B-2 Test Stand at the agency's Stennis Space Center near Bay St. Louis, Mississippi, marking critical milestones for testing the core stage of the new Space Launch System (SLS).

"The stand is certainly busy these days," said Rick Rauch, manager of the B-2 Test Stand project. "We're making significant progress toward 2016 and the arrival of the SLS core stage. It's a very exciting time."

NASA is building the SLS to carry humans deeper into space than ever before. Beginning in 2016 at Stennis, the agency will test the core stage of the new launch vehicle, which is powered by four RS-25 rocket engines, modified versions of the same engines that powered the space shuttle. After testing is complete, the core stage will be used for the maiden, unmanned flight of the SLS.

Completion of major B-2 Test Stand structural restoration elements under work package No. 1 by Harry Pepper & Associates of Jacksonville, Florida, is scheduled for later this month. Restoration and upgrade of the main derrick crane, which sits atop the stand and will be used to lift the core stage into the test stand, is scheduled for completion in early September. The SLS stage is nearly

See **B-2 TEST STAND**, Page 3



"Before-and-after" photos show the progress of renovation work on the B-2 Test Stand at Stennis Space Center as NASA prepares for testing the Space Launch System core stage in 2016. Above photos indicate work on Level 7 of the test stand. Testing of the core stage for the new deep-space vehicle will involve installing the flight stage on the stand and simultaneously firing its four RS-25 rocket engines.

**2014 Hurricane Season Guide appears at end of this issue**

*“Working together as a team facilitates the successful completion of tasks far beyond the capability and output of one individual.”*

From the desk of  
**Monica Allison-Ceruti**

Chief Counsel, Office of the Chief Counsel, Stennis Space Center



**T**he San Antonio Spurs are at it again – quietly winning their way toward a fifth NBA Championship. Yes, I am a huge Spurs fan and have been for years, even during the lean years, and there were many losing seasons. My admiration, however, for the Spurs grew tenfold, if that’s possible, during the 1999 season when the Spurs won their first NBA Championship.

It wasn’t because of the smothering defense of David “The Admiral” Robinson, or Tim “The Big Fundamental” Duncan, or Avery “The Little General” Johnson, or Sean Elliott. It was the way they played the game – no flash, no in-your-face dunks – just unselfish team basketball. Colin Stanton, an avid Spurs fan, recently posted a video titled “The Beautiful Game,” featuring clips of the Spurs players unselfishly passing and shooting the basketball. According to Stanton, “The San Antonio Spurs dynasty is a thing of beauty to basketball purists because they epitomize the definition of a true team. In a league where everyone focuses on individuals and the stars, they are living proof that ‘We is greater than Me.’”

In the Office of Chief Counsel (OCC), we understand the importance of teamwork. Working together as a team facilitates the successful completion of tasks far beyond the capability and output of one individual. Successful teamwork gets the most out of the collective strengths of each person and cultivates strong lasting relationships. This past year, we teamed with internal and external clients and customers to make win-win situations for all.

We teamed with NASA Headquarters, NASA centers, federal and state agencies, private organizations and companies, and colleges and universities, building

solid relationships to ensure the mutual accomplishment of goals and, more importantly, the mission of Stennis Space Center. For example, we successfully teamed with the Office of Procurement to ensure the timely review and award or modification or both of over 400 mission-essential procurement actions. We were in lockstep with the Office of Safety and Mission Assurance on Stennis’ application to the Federal Aviation Administration for an expansion of the restricted airspace over the Stennis buffer zone. We teamed with the Ames Research Center counsel and the Headquarters Office of General Counsel to craft an Enhanced Use Lease Agreement. We successfully partnered with internal and external customers to negotiate and execute many partnership agreements. Zealously protecting the integrity of the buffer zone, we partnered with the United States Army Corps of Engineers and pursued enforcement actions to protect Stennis’ rocket engine propulsion testing mission. During the government shutdown, we successfully teamed with numerous Stennis and Headquarters directorates and the U.S. Navy to quickly and properly resolve complex fiscal and procurement issues to turn on critical support services to the Navy while NASA and Stennis continued to be shut down.

Like the Spurs, the OCC understands that “We is greater than Me.” The OCC had a banner year because of the mutual cooperation and unselfish play of our teammates – teamwork makes for a beautiful game. In the OCC, we will continue to team with our internal and external customers to meet the demands and challenges placed upon us.

*Monica Allison-Ceruti*

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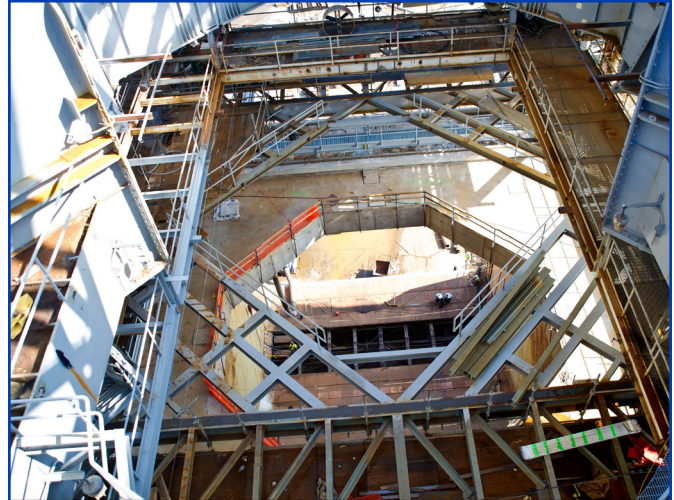
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## FULFILLING NASA'S EXPLORATION MISSION



"Before-and-after" photos show the progress of renovation work on Level 8 of the B-2 Test Stand at Stennis Space Center.

## B-2 TEST STAND

Continued from Page 1

50 percent longer than the Saturn stages previously tested on the stand, so the main derrick has to be significantly upgraded.

Completion of B-2 Test Stand work package No. 2 by Sauer Inc. of Jacksonville, Florida, is scheduled for July. The work primarily focuses on replacement of fixed and movable platforms on the engine servicing deck and restoration of the booster support frame.

Work package No. 3 has also been awarded to Harry Pepper & Associates. It completes B-2's restoration activity, focusing on mechanical/piping and high voltage electrical restoration, and begins the structural buildout of the stand to accommodate the core stage. A new 100-foot superstructure will be constructed for thrust takeout and access to the core stage. Completion is scheduled for spring 2015.

Work package No. 4 will be awarded later this year for completion of mechanical/piping and high voltage electrical buildout activities and replacement of the existing tarmac at the loading dock to accommodate barge offloading of the core stage transporter and insertion into the B-2 Test Stand. It also is scheduled for completion in 2015.

In addition to those packages, NASA will install a new pump alongside existing ones at Stennis' high-pressure industrial water facility to supply an additional 25,000 gallons of water per minute to the B-2 stand. The additional water will be used to suppress the sound of tests and lessen the vibro-acoustic impact on the core stage.

Activation of the stand is set to begin in early 2016. The

SLS core stage is slated for delivery in early fall 2016. Once installed, NASA engineers will conduct three types of tests:

- Modal tests to assess the structural vibration modes.
- Tanking tests to verify prelaunch sequences for pressurizing stage systems and for filling and draining propellants. This will mark the first time cryogenic propellants are introduced into the core stage. Engineers will monitor and collect data on various items regarding how the stage reacts to the very low propellant temperatures.
- Hotfire tests that will involve the simultaneous firing of four RS-25 engines, just as will occur during an actual mission. NASA plans only one or two full tests since the stage is designed for a limited number of chiddowns, including those related to prelaunch and launch activities.

The core stage will be removed from the B-2 Test Stand in early 2017 in preparation for SLS's first mission.

A key aspect of the B-2 Test Stand restoration/modification project is the coordination of work on various fronts, including exactly how the stand needs to be configured to enable testing of an SLS vehicle still in design.

"It's a much more complex process than most people realize," Rauch said. "It requires a lot of communication with multiple stakeholders to make sure tests are conducted properly to supply the needed data to verify flight readiness. This has traditionally been Stennis' special area of expertise."

The SLS Program is managed at NASA's Marshall Space Flight Center in Huntsville, Alabama.

For information about NASA's SLS Program, visit: <http://www.nasa.gov/sls/>.

## Stennis employees receive Silver Snoopy awards



Astronaut Mike Fincke (center, front row) stands with Stennis Space Center recipients of 2014 Silver Snoopy awards following a June 11 onsite ceremony. Eighteen Stennis employees received the astronauts' personal award, which is presented to less than 1 percent of the total NASA workforce annually in recognition of contributions to flight safety and mission success. This year's Silver Snoopy recipients and ceremony participants were: (front row, l to r) Tabatha Butler (A<sup>2</sup>Research); Ashley Speed (NASA); Ben Weisel (Lockheed Martin Test Operations Contract Group); Joseph Bryant (Aerojet Rocketdyne); Gerald Norris (NASA); Fincke; Rosa

Obregon (NASA); Jennifer Franzo (NASA); Andrew Graves (Lockheed Martin Test Operations Contract Group); Paul Foerman (NASA); (back row, l to r) Mark Hancock (Jacobs Technology Facility Operating Services Contract Group); Clayton Carrubba (Lockheed Martin Test Operations Contract Group); Gregory Brinson (Jacobs Technology Facility Operating Services Contract Group); Bob Pair (Aerojet Rocketdyne); Mark Warren (NASA); Stan Hogue (Aerojet Rocketdyne); Ron Snyder (Jacobs Technology Facility Operating Services Contract Group); David Oakes (ASRC Federal); and Thang Le (CSC).

## NASA in the News

### NASA beams 'Hello, World!' message

NASA successfully beamed a high-definition video 260 miles from the International Space Station to Earth on June 6 using a new laser communications instrument. Transmission of "Hello, World!" as a video message was the first 175-megabit communication for the Optical Payload for Lasercomm Science (OPALS), a technology demonstration that allows NASA to test methods for communication with future spacecraft using higher bandwidth than radio waves. OPALS uses focused laser energy to reach data rates between 10 and 1,000 times higher than current space communications. Transmitting data from the space station to Earth requires extremely precise targeting. The process can be equated to a person aiming a laser pointer at the end of a human hair 30 feet away and keeping it there while walking. It took OPALS 3.5 seconds to transmit each copy of the "Hello World!" video message, which would have taken more than 10 minutes using traditional methods. View the "Hello, World!" video transmission and animation of the transmission between OPALS and the ground station, at: <http://youtu.be/1efsA8PQmDA>.

### Orion spacecraft ready to feel the heat

NASA and Lockheed Martin engineers have installed the largest heat shield ever constructed on the crew module of the agency's Orion spacecraft. The work marks a major milestone on the path toward the spacecraft's first launch in December. The heat shield is made of a coating called Avcoat, which burns away as it heats up in a process called ablation to prevent the transfer of extreme temperatures to the crew module. The Avcoat is covered with a silver reflective tape that protects the material from the extreme cold temperatures of space. Orion's flight test, or Exploration Flight Test-1, will provide engineers with data about the heat shield's ability to protect Orion and its future crews from the 4,000-degree heat of reentry and an ocean splashdown following return from space. Data gathered during the flight will inform decisions about design improvements on the heat shield and other Orion systems, and authenticate existing computer models and new approaches to space systems design and development. For more information on Orion, visit: <http://www.nasa.gov/orion>.

For NASA news releases, visit: [www.nasa.gov/news/releases/latest/index.html](http://www.nasa.gov/news/releases/latest/index.html).



## NASA procurement, governmental affairs teams visit Stennis



A pair of NASA teams visited Stennis Space Center recently to hold scheduled meetings. On June 3, members of the NASA Office of Legislative & Intergovernmental Affairs (right photo) held their annual meeting at Stennis. In addition to business items, the group toured the center and INFINITY Science Center. The tour included a briefing on engine test operations at the A-2 Test Stand. On June 5, members of the NASA Procurement Leadership team (above photo) met at Stennis. They also participated in a tour of the center, which included a briefing at the B-2 Test Stand. NASA is preparing the stand to test the core stage of the new Space Launch System in 2016.



## Stennis observes Asian American Pacific Islander Month

Larry LaFrance of NASA (l) and Anthony Thomas with the Navy Office of Human Resources Center offer a plaque of appreciation to Lori Huthoefer following her presentation during the 2014 Asian American Pacific Islander Lunch & Learn session at Stennis Space Center on May 20. Huthoefer is a Korean native and president of Patriot Technologies, which provides products and support in aerospace, aviation and public building services. The company recently held the Administrative Clerical Support Services contract at Stennis. During the May 20 session, Huthoefer talked about her experiences as a Korean native, who was adopted by an American family and moved to the United States at age 5. In ensuing years, she received degrees in economics, built a career in government service and established her own company. Since 1977, the month of May has been designated to recognize the achievements and contributions of Asian Americans, Pacific Islanders and Native Hawaiians to the United States.





# MTF becomes NASA field installation

*Note: For more than 50 years, NASA's John C. Stennis Space Center has played a pivotal role in the success of the nation's space program. This month's Lagniappe provides a glimpse into the history of the south Mississippi rocket engine test center.*

Long before the first space shuttle main engine test, NASA realized the importance of its south Mississippi center. Forty years ago, on June 14, 1974, then-NASA Administrator James C. Fletcher announced that the Mississippi Test Facility had been upgraded to the National Space Technology Laboratories (NSTL), a permanent NASA field installation reporting directly to NASA Headquarters in Washington, D.C.

The new status reflected the importance of growth in current and future NASA programs and activities of other agencies that took advantage of the resources available at NSTL.

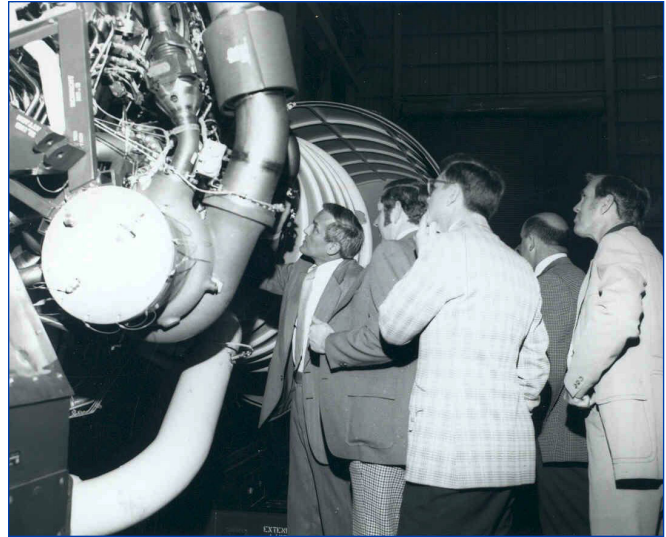
“NSTL has developed into an installation where highly qualified capabilities exist for conducting remote sensing, environmental and related research and technical activities,” Fletcher said during his announcement. “These capabilities have been enhanced in recent years by the location at NSTL of research and technical activities of several other government agencies. The success of this experiment in the collocation of these mutually supporting activities has led me to decide that NSTL will have a permanent role in NASA's space applications and technology programs.”

Designed and created by NASA in 1961 as part of Marshall Space Flight Center in Huntsville, Ala., the site in south Mississippi was first established and used for static testing of the large Saturn V rocket engines used in the Apollo program.

As the Apollo program drew to a close, NASA and several other agencies moved a variety of research and technical activities – primarily related to Earth resources and the environment – into the modern facilities available at the 138,000-acre site. One thousand contractors and civil servants were employed at the site.

NASA's activities at NSTL included developmental testing of the main engine for the space shuttle and the Earth Resources Laboratory, which had been established four years earlier. Other agencies located at NSTL during this time included the departments of Commerce, Interior, Transportation and the Army, along with the U.S. Environmental Protection Agency, the State of Mississippi and various other state and university elements from Mississippi and Louisiana.

“By renaming the facility and elevating its status, it is



(Top photo) Visitors from Huntsville, Ala., view the first space shuttle main engine in Building 3202 at the National Space Technology Laboratories. The first static test-firing of the space shuttle main engine test on the A-1 Test Stand was conducted on May 19, 1975. During the next month, the first space shuttle main engine achieved ignition on June 12 and was fired full duration without an early shutdown on June 24.

(Bottom photo) Eleven months after the Mississippi Test Operations became the National Space Technology Laboratories, the first static test-firing of the space shuttle main engine test on the A-1 Test Stand was conducted on May 19, 1975.

my intention to recognize the importance of NSTL to current and future programs of NASA and to encourage and facilitate the location at NSTL by other government agencies of additional activities which can both benefit from and contribute to the capabilities which exist there,” Fletcher said.

Nearly one year to the day after Fletcher's announcement, the first space shuttle main engine achieved ignition on June 12, 1975, at the then-NSTL, marking the beginning of more than 30 years of successful space shuttle main engine testing by the site.

## Office of Diversity and Equal Opportunity

# Consider options in dealing with workplace bullies

*"I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel."*

(Maya Angelou)

**W**e all have a right to come into work and expect an environment that is productive. We should not have to deal with rude individuals who make unsolicited comments that are insulting to us.

There are always people who get their kicks by tormenting someone else. They enjoy insulting or teasing others because they themselves are insecure or want to look cool in front of others. They are looking for a reaction; they expect it, so don't give it! That does not mean you should do nothing. The next time somebody tries to insult or tease you in a way you do not like, try not to overreact.

Think about what the other person wants. People do not start fights for no reason. Think about what they are hoping to get from you. Are they trying to intimidate you? Are they trying to make you look incompetent to others? Are they expecting you to break down? Are they trying to start an argument? Think before reacting; you do not want to give them the satisfaction of making you upset.

Think about the context of the insult. Use the location of the incident to your advantage in planning your next move. The person who insults you in public is most likely trying to lower your social status and raise his/her own. A person who targets you when you are on your own is hoping to find you vulnerable.

If you are in public, get others on your side. If you respond with a joke, think about what will make them laugh. If friends are around, stand beside them so that you appear stronger. If you are on your own, do not feel weak. By cornering you, your bully knows their actions are not acceptable. And that means they can be shamed.

Walk away from the situation if you can. Bullies will often take any reaction as encouragement to continue. The easiest way to defuse the situation is to not let it happen at all. Walk casually over to your friends or smile vaguely, as if responding to a small child, and turn your attention elsewhere. This may get the bully to back down.

Ask them what they want. Sometimes, simply asking, "Are you trying to hurt me?" is enough to make a person back down. Use your imagination. If the person insults your dress sense, you could respond with a nonchalant, "Yes, that's true, and maybe you can tell me where you shop for clothes?" This will derail the person's train of thought.

Enlist friends to help you. If the insulting or teasing is becoming a regular occurrence, get friends to walk with you. Bullies want isolated targets and usually will back down when there is a group. Always remember that there is only one you, and no one has the right to make you feel bad about yourself. So, do not try to change yourself to make a bully accept you because the bully has already made up his/her mind about hating you.

Get the help of an authority figure if you feel that it is necessary. Think nothing of anyone who will talk about you for this or any other problems that may arise. You are trying to get the tormentor to stop being mean, not to get them to be your friend. Never stay silent.

Employees have many options in the workplace. If someone is bullying you, making insulting comments or demeaning you in front of others, speak with your supervisor or contact the Office of Human Capital, the Office of Diversity and Equal Opportunity or the ombudsman.

## Hail & Farewell

### NASA bids farewell to the following:

Mark Mick	AST, Experimental Facilities Tech	Center Operations Directorate
Courtney Gaines	Management and Program Analyst	Office of the Chief Financial Officer

### And welcomes the following:

LeSamuel Gardner	Student Intern	Center Operations Directorate
Alana Jones	Student Intern	Office of Human Capital
Courtney Cackowski	Student Intern	Office of Communications
Joshua Finch	Student Intern	Office of Communications
Jasmine King	Summer Intern	Engineering & Test Directorate
Martin Aveton Jr.	Summer Intern	Engineering & Test Directorate



# NASA educators host STEM activities during Rocket Day event for New Orleans-area students

Educators from Stennis Space Center led more than 250 students and parents in STEM (science, technology, engineering and mathematics) NOLA Rocket Day activities at Joe Brown Park in New Orleans on May 10.

Partnering with personnel from NASA's Michoud Assembly Facility in New Orleans, educators shared information and led activities related to NASA's new Space Launch System spacecraft, which will carry humans farther into space than ever before. Boeing was the title sponsor of the event. Michoud is helping to build the SLS spacecraft. Stennis is responsible for testing both the engines that will help power the craft and the SLS core stage.

NASA speakers offered details on the SLS Program and on the rocket engine test work conducted at Stennis. The featured speaker for the event was Jeanette Epps, a member of NASA's 2009 astronaut class. Epps spoke to participants about the training astronauts undergo to serve as members of International Space Station expedition teams. The event

culminated with students building and launching their own rockets, an activity designed to spur their interest as future space innovators, creators and entrepreneurs.

STEM NOLA seeks to expose, inspire and engage children across the city of New Orleans in the areas of science, technology, engineering and mathematics in large numbers and in a meaningful way. The effort features hands-on, project-based activities for kindergarten-through-12th-grade youths of all races, sex and economic backgrounds. College students and professional volunteers are used as mentors, instructors and role models.

Leaders in the May 10 event included: Vic Richards, executive director of New Orleans Recreational Development Commission; Calvin Mackie, STEM NOLA founder; James Gray, a New Orleans City Council member; Epps; Austin Badon, a Louisiana state representative; Rick Navarro, director of operations for Boeing's Space Exploration Division; and Katrina Emery, Stennis Space Center education director.



New Orleans-area students and parents participated in a variety of informational and hands-on activities during a STEM NOLA Rocket Day event May 10. Speakers at the event included astronaut Jeanette Epps (right photo), who talked with participants about the training astronauts undergo to serve as members of International Space Station teams.



# Stennis introduces space campers to Magical World of Science



Stennis Space Center hosted kids ages 7-12 for a pair of one-day Astro Camp sessions at INFINITY Science Center on May 10 and May 17. Campers learned about science NASA-style, participating in a wide range of hands-on activities and experiments using the scientific method. Activities included the study of density, surface tension, chemical bonds, filters and polymers and discussions on how these are used in space. A color-changing activity with carnations and food coloring helped campers understand transpiration and cohesion.



## Stennis hosts 2014 Old Timers' Day

Some 150 former Stennis Space Center employees enjoyed a return to the site for Old Timers' Day activities May 16. The annual fellowship was attended by retirees, guests and employees. The gathering was sponsored by the Stennis Recreational Association, with contributions from the NASA Exchange, Jacobs Technology, Aerojet Rocketdyne, Keesler Federal Credit Union and V.B.S., LLC.



# Hurricane Guide

The 2014 hurricane season has arrived – and NASA’s John C. Stennis Space Center has prepared this four-page guide as a resource for Stennis employees. The guide offers invaluable information: a hurricane tracking map, storm-rating information and contact numbers for emergency situations. It also serves as an important reminder for every Stennis employee to be prepared and alert for whatever the 2014 storm season may deliver.

## Stennis Space Center WILL NOT serve as a shelter to any workers or families.

As part of their hurricane season preparation, individuals are urged to contact parish/county offices to identify available shelters in their areas.

In both Louisiana and Mississippi, persons are reminded they may call 2-1-1 to obtain information about health and human services available in their areas.

The number is staffed 24 hours a day in Louisiana and on weekdays, 7 a.m. to 6 p.m., in Mississippi. It offers information on various services, including food, clothing, shelters and transportation assistance.

Stennis employees are reminded to discuss their evacuation plans with supervisors so they can be contacted after a storm or to acquire their company/agency policy on contacts after a storm.

NOTE: If NASA employees cannot contact Stennis due to downed communications after a storm, they should call 877-776-4654 to report their status.

### Emergency preparation checklist

- Gather a two-week inventory of emergency supplies, such as flashlights, batteries, a battery-operated radio, blankets and pillows, canned and dried food, non-electric can opener, eating/cooking utensils, emergency cooking facilities (grill or camp stove), fuel, cash and/or credit cards, clothes, toiletries, water (1 gallon per person a day), prescription medications, first-aid kit/handbook, fully-charged cell phone, towels, sleeping bags, etc.
- Back up computer files.
- Gather basic post-storm cleanup and repair supplies, such as axes, brooms, a camera to record damage, cleaning supplies, mosquito repellent, trash bags, hand tools, a chain saw, duct tape, plastic tarps, extension cords, a ladder, generator and fuel, etc.
- Collect valuable papers, such as social security cards, birth certificates, marriage and death records, insurance policies, savings and checking books, etc.
- Prepare an inventory of household goods.

### National resource information

American Red Cross .....	800-REDCROSS (733-2767) www.redcross.org
Federal Emergency Management Agency (www.fema.gov).....	800-621-FEMA (3362)
National Oceanic and Atmospheric Administration (NOAA).....	www.noaa.gov
NOAA National Hurricane Center .....	www.nhc.noaa.gov
NOAA National Weather Service Southern Region (www.srh.noaa.gov) .....	Jackson 601-965-4638 Mobile 251-633-6443 Slidell 985-649-0357
NOAAWatch - NOAA’s All-Hazard Monitor.....	www.noaawatch.gov
U.S. Department of Homeland Security .....	www.dhs.gov

### Mississippi resource information

Mississippi Emergency Management Agency (www.msema.org) .....	866-519-MEMA (6362) (24 hrs) 800-222-MEMA (6362)
Mississippi Department of Transportation (www.mdot.ms.gov and www.mdottraffic.com) .....	601-359-7001 (activated only during a disaster) 866-521-MDOT (6368)
Mississippi Highway Safety Patrol (www.dps.state.ms.us) .....	601-987-1212 (*HP from any cell)
Mississippi Public Broadcasting (www.mpbonline.org) .....	(24-hour hotline) 601-326-1184
Governor’s Office (www.governorbryant.com) .....	601-359-3150
Mississippi Insurance Department (www.mid.ms.gov) .....	800-562-2957
U.S. Coast Guard (Sector Mobile) .....	251-441-6211
Mississippi Power (www.mississippipower.com) .....	800-532-1502
Coast Electric Power (www.coastepa.com) .....	877-769-2372

### Louisiana resource information

Office of Homeland Security and Preparedness (www.gohsep.la.gov) .....	225-925-7500
Louisiana Department of Transportation (www.dotd.louisiana.gov).....	877-4LA-DOTD (452-3683)
National Weather Service Forecast Office (New Orleans/Baton Rouge) .....	504-522-7330
Louisiana State Police (www.lsp.org) .....	225-925-6325 (*LSP from any cell phone)
Louisiana State Police Road Closure Hotline .....	800-469-4828
Louisiana Governor’s Office (www.gov.louisiana.gov) .....	866-366-1121
Louisiana Department of Insurance (www.ldi.louisiana.gov) .....	800-259-5300 or 225-342-5900
U.S. Coast Guard (Sector New Orleans) .....	504-365-2200
Cleco Corporation (www.cleco.com) .....	800-622-6537
Entergy (www.entergy-louisiana.com) .....	800-ENTERGY (368-3749) Power outages: 800-9OUTAGE (968-8243)
Washington-St. Tammany Electric Cooperative (www.wste.coop) .....	985-643-6612 Power outages: 866-672-9773



# Louisiana-Mississippi interstate contraflow plan

In an effort to assist Louisiana in the event of a mandatory hurricane evacuation, the Mississippi Department of Transportation will implement contraflow (lane reversal) for I-59 and I-55 when requested by Louisiana and approved by the Mississippi governor.

- A contraflow decision is not automatic and will only be used when absolutely necessary. Citizens should not delay evacuation plans in anticipation of contraflow.

- I-59 contraflow will begin in Louisiana, extend into Mississippi and end near mile marker 55.

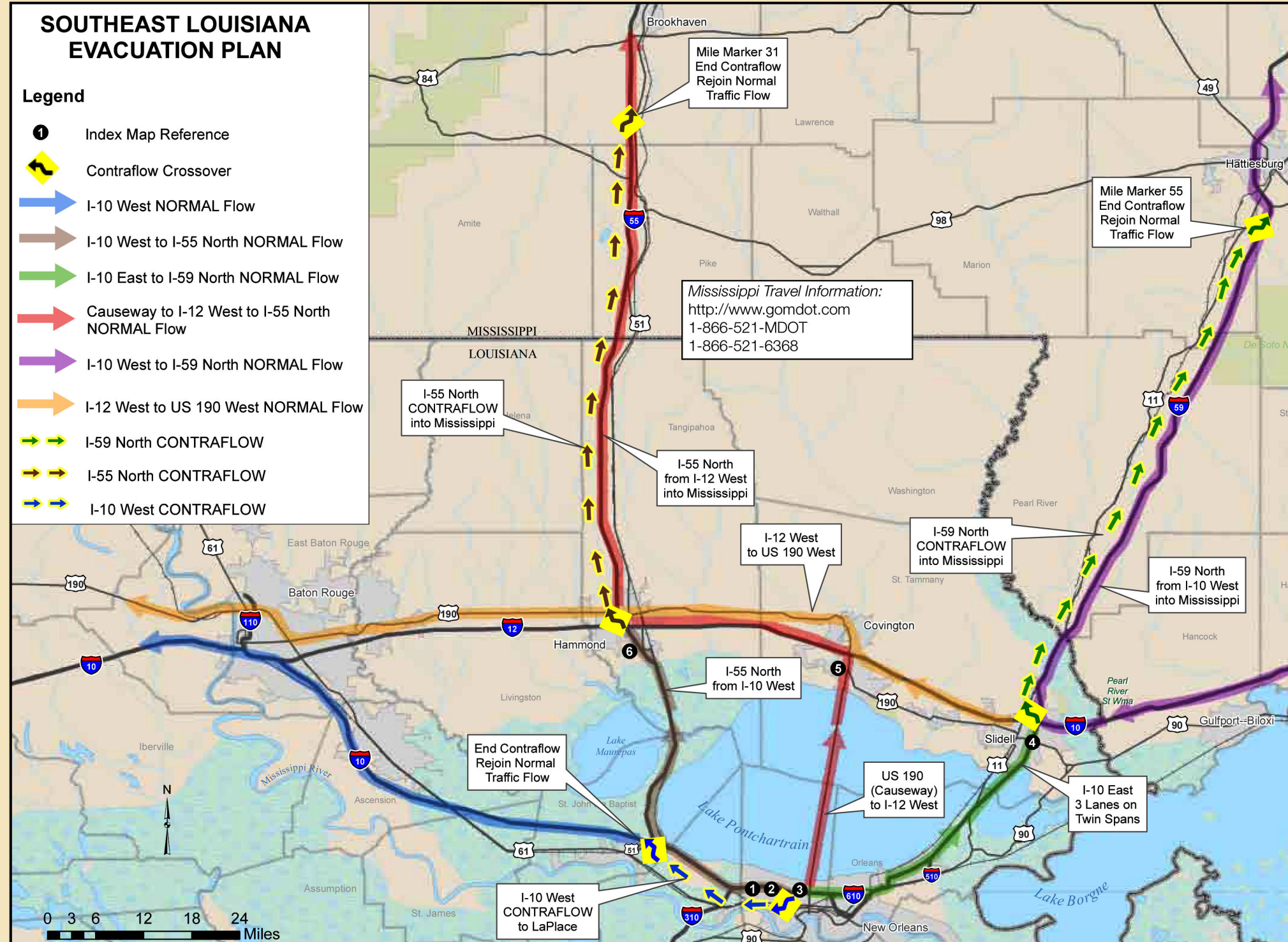
- I-55 contraflow will begin in Louisiana, extend into Mississippi and end near mile marker 34.

- Exits within the contraflow sections of the interstate highways will remain open as conditions allow. Law enforcement officers will assist with traffic control.

- Shoulders of both Interstates 59 and 55 should be kept clear for emergency vehicles. To stop, motorists should use the next available exit.

- I-10 East will be closed when contraflow begins. Individuals should evacuate to the north, not to the east.

- Tune in to public broadcasting radio stations for emergency information and road conditions.



## Hurricane strength

### Category One

Winds 74-95 mph. Storm surge 4-5 feet.

### Category Two

Winds 96-110 mph. Storm surge 6-8 feet.

### Category Three

Winds 111-130 mph. Storm surge 9-12 feet.

### Category Four

Winds 131-155 mph. Storm surge 13-18 feet.

### Category Five

Winds greater than 155 mph. Storm surge more than 18 feet.

## Severe weather terms

### Storm surge

An abnormal rise of sea/gulf water along a shore as the result, primarily, of winds from a storm.

### Watch

Adverse conditions are *possible* in the specified watch area, usually within 36 hours. A watch may apply to thunderstorms, tornadoes, floods or hurricanes.

### Warning

Adverse conditions are *expected* in the specified warning area, usually within 24 hours. A warning may apply to thunderstorms, tornadoes, floods or hurricanes.

## Public shelter information

Shelters are operated by trained individuals and are designed to ensure the safety, security and basic needs of sheltering residents are met.

### What to bring to a shelter

Residents seeking shelter should bring a change of clothing, a blanket and a pillow for each person in their family or group. Residents also should bring their disaster supply kit, including food, medications, comfort items and special items for infants or elderly persons.

### What not to bring to a shelter

No weapons, drugs or alcohol are allowed.

## Hurricane preparedness apps

### Get a Game Plan

A Louisiana government app covering various areas of preparedness needs.

### Alert FM

Functions as a weather radio, with unique local alerts from emergency officials.

### FEMA

Provides safety tips, interactive aids and maps of shelters and recovery centers.

### Your Plan

An Insurance Information Institute app with various preparation and mitigation aids.