





This month marked a welcome step forward at Stennis Space Center – the reopening of the INFINITY Science Center, a place I hold dear in my heart. I could not wait to explore my favorite exhibits that I have missed since the facility closed due to COVID-19 in December 2020.

When entering the center, I always begin in the Earth Gallery exhibits on the first floor. I get lost in thought at the interesting learning exhibits, including the Sandbox, the Inundation Station, and the Hurricane Prediction Lab. Time has a tendency to pass quickly as I press buttons to see the experiments come to life.

As you can guess, I am a big fan of the water. The Deep Ocean Explorer is perfect for days I do not want to get my tail wet, but still see a few of my fishy friends. I am always sure to end my time on this floor by stopping by The Swamp to Space gallery, which not only reminds me of my home but allows me to see the growth of my favorite place – Stennis Space Center.

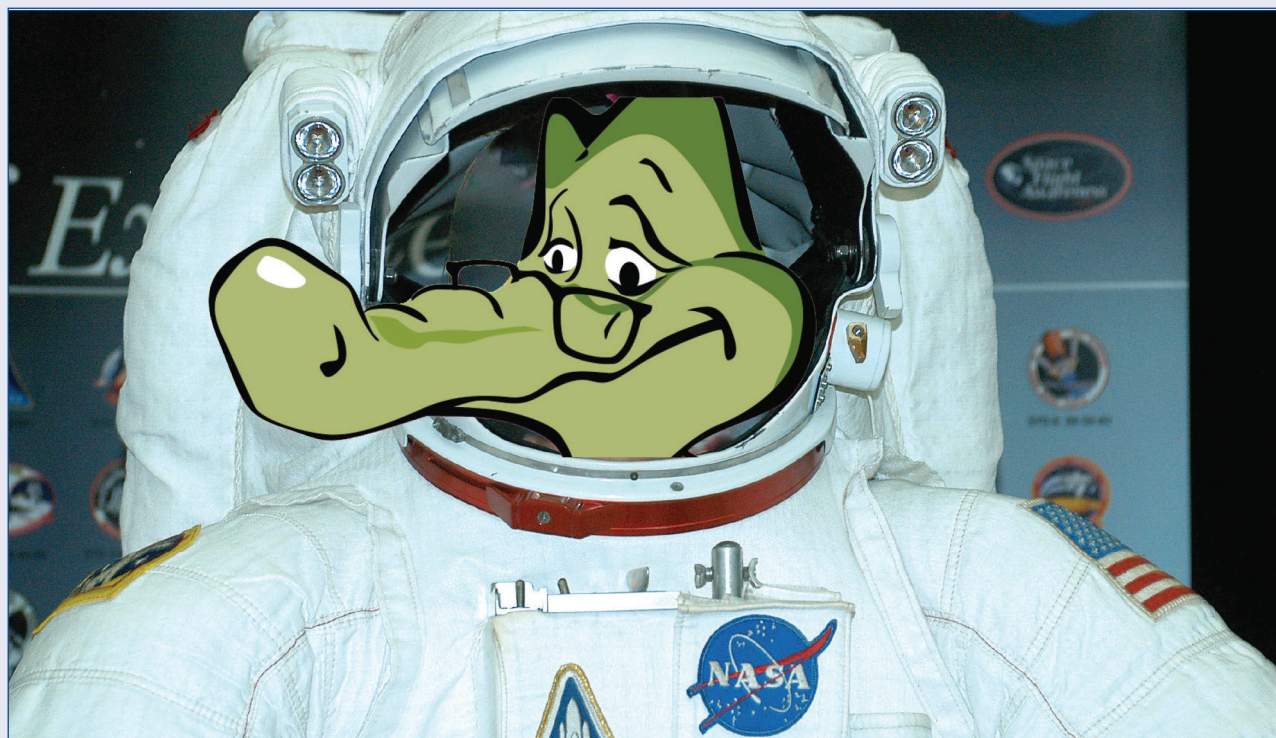
On the second floor, my imagination runs wild in the Space Gallery. Small- and full-scale models provide a perfect viewing experience for any space lover, offering them a taste of what being a space explorer is like.

In fact, when inside the life-sized mockup of the International Space Station, I often pretend I am completing an actual mission in space. Once returned to Earth, I then enjoy a fun selfie session, using the Sensors, Satellites, & Selfies module to make my Instagram feed more interesting.

At the INFINITY Science Center grand reopening event, visitors were offered even more opportunities to live out their science-related dreams with special activity and guests.

I even had a chance to meet my favorite Star Wars characters Chewbacca and R2-D2. Who knows – maybe there will be a role for ol' Gator in the next movie installment – Ark!

All in all, it was a great day, and the official reopening of the facility means more children will get to come out on other days to live out their space dreams and fill their heads and dreams with visions of galaxies and shooting stars. It is always excited to see future generations receive the first spark of interest in space. Who knows – it may even be their first stepping to a future in space exploration, maybe even as a member of the Stennis team!



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Contact info – (phone) 228-688-3749; (email) [ssc-pao@mail.nasa.gov](mailto:ssc-pao@mail.nasa.gov); (mail) NASA OFFICE OF COMMUNICATIONS, Attn: LAGNIAPPE, Mail code IA00, Building 1100 Room 304, Stennis Space Center, MS 39529

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Managing Editor – Lacy Thompson

Editor – Kaylan Courteaux

Staff Photographer – Danny Nowlin





# NASA Fires Up Fourth RS-25 Engine Test for Future Artemis Moon Missions

NASA conducted its fourth RS-25 single-engine hot fire of the year on May 20, a continuation of its seven-part test series to support development and production of engines for the agency's Space Launch System (SLS) rocket on future missions to the Moon. The engine was fired for more than 8 minutes (500 seconds) on the A-1 Test Stand at Stennis Space Center, the same amount of time RS-25 engines need to fire for launch of the SLS rocket. The test series is designed to provide valuable data to Aerojet Rocketdyne, prime contractor for the SLS engines, as it begins production of new engines for use after the first four SLS flights. Four RS-25 engines, along with a pair of solid rocket boosters, will help power SLS at launch. With testing of the engines for the rocket's first four Artemis missions to the Moon already completed, operators now are focused on collecting data to demonstrate and verify various engine capabilities while reducing operational risk. During the May 20 test, the team fired the engine at 111% of its original power level for a set duration of time, the same level that RS-25 engines are required to operate during launch. SLS is the most powerful rocket NASA has ever built and the only one capable of sending Orion, astronauts, and supplies to the Moon in a single mission. As part of the Artemis program, NASA will land the first woman and the first person of color on the Moon and establish sustainable exploration in preparation for missions to Mars. SLS and NASA's Orion spacecraft are NASA's backbone for deep space exploration. RS-25 tests at Stennis are conducted by a combined team of NASA, Aerojet Rocketdyne and Syncom Space Services operators. Syncom Space Services is the prime contractor for Stennis facilities and operations.







These tiny squids went to space along with many other scientific experiments aboard SpaceX's 22nd cargo resupply mission to the International Space Station, launched on June 3. The squids are a part of the UMAMI study which examines the effects of spaceflight on interactions between beneficial microbes and their animal hosts. UMAMI stands for Understanding of Microgravity on Animal-Microbe Interactions. Microbes play a significant role in the normal development of animal tissues and in maintaining human health. This investigation helps determine whether spaceflight alters the mutually beneficial relationship, which could support development of protective measures and mitigation to preserve astronaut health on long-duration space missions. The work also could lead to a better understanding of the complex interactions between animals and beneficial microbes, including new and novel pathways that microbes use to communicate with animal tissues.

## NASA in the News

### NASA to Study the 'Lost Habitable' Venus

NASA has selected two new missions to Venus, Earth's nearest planetary neighbor. Part of NASA's Discovery Program, the missions aim to understand how Venus became an inferno-like world when it has so many other characteristics similar to Earth – and may have been the first habitable world in the solar system, complete with an ocean and Earth-like climate. These investigations are the final selections from four mission concepts NASA picked in February 2020 as part of the agency's Discovery 2019 competition. Following a competitive, peer-review process, the two missions were chosen based on their potential scientific value and the feasibility of their development plans. The project teams will now work to finalize their requirements, designs, and development plans. NASA is awarding approximately \$500 million per mission for development, expecting to launch in the 2028-2030 timeframe. The selected missions are: DAVINCI+ (Deep Atmosphere Venus Investigation of Noble gases, Chemistry, and Imaging) and VERITAS (Venus Emissivity, Radio Science, InSAR, Topography, and Spectroscopy).

### NASA Rover Begins First Mars Campaign

NASA's Perseverance Mars rover kicked off the science phase of its mission by leaving the "Octavia E. Butler" landing site. Until recently, the rover has been undergoing systems tests, or commissioning, and supporting the Ingenuity Mars helicopter's month of flight tests. During the first few weeks of this first science campaign, the mission team will drive to a low-lying scenic overlook from which the rover can survey some of the oldest geologic features in Jezero Crater, and they will bring online the final capabilities of the rover's auto-navigation and sampling systems. By the time Perseverance completed its commissioning phase, the rover had already tested its oxygen-generating MOXIE instrument and conducted the technology demonstration flights of the Ingenuity helicopter. Its cameras had taken more than 75,000 images, and its microphones had recorded the first audio soundtracks of Mars. The Mars 2020 Perseverance mission is part of NASA's Moon to Mars exploration approach. To learn more about NASA's Venus missions, click [here](#). To learn more about Perseverance, click [here](#).



# INFINITY Science Center Reopens to the Public for the First Time Since Dec. 2020

**I**NFINITY Science Center, the official visitors center of NASA's Stennis Space Center, officially reopened its doors to the public for the first time May 29 following its temporary closing on Dec. 30, 2020, due to COVID 19.

During a daylong grand opening event, visitors were greeted by Stennis astronaut mascots Orbie and Starla; special Stars Wars guests, including Chewbacca and Darth Vader; the International Star Trek Fan Association; the Mandeville Robotics Team 2992; and others. They also had a chance to engage in various hands-on activities hosted by a team of Stennis visitor relations specialists.

By blending space, Earth science, engineering, and technology content to create a unique learning environment, INFINITY Science Center attracts guests from far and wide, all hoping to get a hands-on understanding of space.

Some end up at the site by chance. Robert Watson was traveling from Florida on vacation when he stumbled upon the center, which he considered a moment of luck. "This place is awesome," he said. "The kids are enjoying it. I've had fun. Everything so far, so good, and we are going to the 3D theatre later, too." Watson's daughters, busy tie-dying plates next to him, said they hope to become a scientist and astronaut, respectively.

Entering the center, guests first encounter The Earth Gallery, which features such exhibits as the Inundation Station, the Sandbox, and Environmental Monitoring Stations. A Hurricane Prediction Lab offers guests a hands-on and up-close opportunity to learn about the key conditions that influence hurricanes. Visitors also can learn about the Gulf of Mexico, observing a variety of sea life at the Deep Ocean Explorer exhibit.

Following The Earth Gallery, guests are ready to travel back in time through the Space Gallery, featuring early space history and a progression of NASA exploration missions from the Apollo Program to construction of the new Space Launch System rocket designed to return humans to the Moon as part of the Artemis program and power eventual missions to Mars. In this gallery, visitors can see the advancement of technology in real-time, building excitement for future missions and technological advancements.

"I remember when I was growing up, they used to show every time the space shuttle would take off," said Tiffany Brown, a member of the USS Neptune NNC-75013, the Biloxi-based Star Trek Fan Association. "They would show it in school, and I wanted so badly to be on the space shuttle. I've always had my head in the stars. It's just amazing what's out there." Brown's visits to INFINITY only amplify this excitement, allowing her to learn about the real science behind the science fiction world she fell in love with on as a child.

Located on the second floor of the center, Space Gallery exhibits feature a variety of items, including a small-scale Apollo command module next to the full-scale original Apollo 4 command module, which actually flew in the first "all-up" test of the Saturn V rocket in 1967. When surrounded by INFINITY's simulators, artifacts, video theatres, and life-sized, walk-through mockup of the International Space Stations Destiny module, it is hard not to think of what the future may hold, which is exactly what 12-year-old William Wedgeworth likes to do at what he considers his self-proclaimed second home.

"I probably want to be an astrophysicist, and the INFINITY Science Center really helps inform me of all of the things I might need to know...", he said. "I really enjoy doing the Astro Camp®, and it helps me collaborate with everybody else who likes doing the things that I want to do in my field. Birds of a feather."

As the official visitor center, INFINITY aims to be the focal point for Earth and space science education and dialogue in the Gulf Coast area between New Orleans and Pensacola, Florida. The 72,000-square-foot facility displays over 50 years of NASA history and has helped educate K-12 students across five states since first opening in 2012. This year, INFINITY leaders hope to serve even more.

"In the immediate future, we are starting Astro Camp® sessions in two weeks, and we'll continue to have large events, like this, usually at least once a month as well as special members-only benefits as well," said Anne Peek, a resident of Mississippi and partner of the INFINITY Science Center. "We just want to keep doing what we do, and that's to do science for folks and have fun."

With the reopening, INFINITY Science Center staff members hope they are one step closer to getting back to normal, which entails sharing their knowledge and love of science with kids and adults alike. For information about the center, visit online at: [www.visitinfinity.com](http://www.visitinfinity.com).



(Top) Jackson Barber, of Mandeville, Louisiana, poses in front of an inflatable Mars Rover outside of INFINITY Science Center dressed in a NASA astronaut suit during the facility's grand reopening May 29. The day marked the first time the center has been open since its closing in December 2020 due to COVID 19.





(Left photo)) Imani Wellington, of Slidell, Louisiana, participates in a hands-on learning experience at the INFINITY Science Center grand reopening event May 29, using a variety of building blocks, tubes, and cardstock graphics to design her very own space craft to explore the solar system. The reopening event marked the first time the science center had opened to the public since it closed due to the COVID-19 pandemic in December 2020.



(Right photo) A young girl, watched by her mother, participates in the tie-dye booth at the INFINITY Science Center during the facility's grand reopening May 29, following its closure due to the COVID-19 pandemic. The tie-dye station was a popular exhibit at the event, attracting several young children hoping to get the chance to get their hands on their very own tie-dye plate. First opened in 2012, the science facility is the official visitor center for Stennis Space Center.



(Above photo) Nathanim Simpson (r), of Mobile, Alabama, gathers with others around a movie-accurate R2-D2, a popular droid character from the Star Wars franchise, at INFINITY Science Center's grand reopening May 29.





(Left photo)  
A young girl operates a robot, provided by Team 2992 – The S.S. Prometheus – Mandeville High School's FIRST Robotics team, during the grand reopening of INFINITY Science Center on May 29.

(Right photo)  
Aiden (l to r), Cody, and Carolyn Grygar of Houston examine a sand-based experiment that allows them to make their own impact crater at the INFINITY Science Center grand reopening event May 29. An inflatable model of the Moon is seen nearby.



(Left photo)  
Stennis Space Center visitor relations specialist Nick Middleton watches as a young visitor interacts with Starla, one of two Stennis astronaut mascots at the INFINITY Science Center during the facility's grand reopening May 29 following its closure due to the COVID-19 pandemic. Current hours of operation for the science center are- Thursdays through Sundays, 10 a.m. to 6 p.m.



# A Resource Analyst Made the Impossible, Possible at Stennis

Given the chance, Veronica Causey has definite words of wisdom she would offer to her 13-year-old self and others like her. “It truly does not matter where you come from or how little you have growing up; what matters is your belief, perseverance, and willingness to walk through the doors [of opportunity] before you,” she would tell the girl who grew up working in Mississippi cotton fields. “Also, if you happen to be the first, do not be afraid to create a door.”

They are words Causey, a resource analyst at Stennis Space Center responsible for annual budget formulation and execution for several critical test projects at the rocket propulsion test site, clearly has put to practice in her own life. At 13 years old, however, the path that led to her Stennis career seemed unlikely.

Born and raised in Hollandale, Mississippi, one of the richest cotton-growing areas in the nation before the American Civil War, Causey learned the value of hard work and dedication from a young age. “I grew up in an area that I never knew was classified as “poverty-stricken” until the age of internet and Google,” she said.

Her parents, Alice and Jimmy Causey, made sure to instill, what they viewed as, necessary values into their young children – to be godly and respectful to all, to obtain an education, and to work hard in whichever career path they chose. During the summers before she would return to Simmons High School, Causey spent hours a day working in various cotton fields, the only type of job that was available for children her age.

It was during these earlier years that Causey had her first experience with space through a television program titled *Lost in Space*. The show followed a space colony family struggling to survive when an accidental stowaway throws their ship off course. While the show originally aired before her time, Causey was able to watch reruns as a child. “I can recall the Robinson family being stuck on this planet with a robot and having to overcome many challenges and fight space creatures,” she said.

It was not until 2010 that Causey would find herself surrounded by space again. After relocating to Picayune, Mississippi, after Hurricane Katrina, a large Category 5 Atlantic hurricane, Causey was offered an

opportunity to work as a Financial Technician with the Naval Oceanographic Office in 2006. By the end of 2010, she began her journey with NASA at the NASA Shared Services Center. After returning from a holiday break in 2016, Causey later transferred to the Stennis Office of the Chief Financial Officer (OCFO) Financial Management Division.

Not long after she transferred to the OCFO Resource Management Division, where she served as a junior resource analyst for Space Launch System (SLS) RS-25 test project. She would later transfer into her current position, Senior Resource Analyst, where

she is also the resource analyst for SLS Core Stage and Exploration Upper Stage. Like most career paths, the job did not come without its own set of challenges, and Causey had to face a big one – test activities. From ordering propellants to renting tents for test viewing events, funding plays a major role in the day-to-day life at the center. This was particularly true during Green Run activities to test the SLS core stage on the B-2 Test Stand.

Causey had a strict budget to stick to for the project. However, the testing schedule was constantly affected by factors outside of NASA’s control, including a worldwide

pandemic and several tropical storms. As a result, Causey was tasked with not only extensions but also requesting more funding for the project. She considers seeing the successful final hot fire test of the SLS core stage Green Run series in March as one of her proudest moments supporting NASA. In her eyes, it was proof that years of planning is the key to success and anything can truly be accomplished when working as a team.

“Being a part of an historical event that will impact the world and mankind, is simply an honor,” Causey said. “I am deeply grateful to play a role in such a significant part of America’s history.”

Causey considers the people she works with the best part of her job at Stennis and has built “unbreakable” friendships with those around her. She and her team members have received three Group Achievement awards (2017, 2019, 2020) in recognition of their outstanding support and contributions to several activities, including the solar eclipse event, the Apollo 50th anniversary, and A-1 Test Stand refurbishment project in support of the Artemis program.

“Stennis Space Center is a workplace that values the collaboration of individuals with diverse backgrounds, skills, cultures, and ideas no matter the race, gender, religion, sexual orientation, etc.,” Causey said. “I am proud to say that I am a member of the Stennis workforce.”

When facing her future at Stennis, Causey is excited for what is to come and hopes to witness Artemis II, the first crewed flight test of the SLS rocket, in person. “Here at Stennis, we test the future and the future is Artemis,” she said.



Born and raised in Hollandale, Mississippi, Veronica Causey has made her childhood dreams, that were once considered unimaginable, possible at Stennis Space Center. As SLS Senior Resource Analyst, she directly contributed to the budget and funding that played a major role in the completion of Green Run testing of the core stage for NASA's Space Launch System rocket on the B-2 Test Stand.



# NASA Establishes Digital Transformation Office

A new NASA Digital Transformation Office has been established to help the agency modernize its workplace, workforce, and work products by embracing digital culture and technologies. The initiative is part of NASA's commitment to improve the methods, techniques, and processes used to execute its critical mission.

Since late 2017, NASA has been gearing towards Digital Transformation as a necessary component of its efforts. The overall goal is to help advance agency missions more quickly and efficiently while further enabling a culture of robust innovation.

Digital Transformation is already prevalent as most people use powerful digital tools to accomplish tasks.

Withdrawing funds from an ATM, navigating by GPS during travel, and using cell phones to listen to favorite playlists are all outcomes of Digital Transformation. NASA's embrace of this digital evolution is designed to yield powerful new capabilities and enhance both agency operations and the way employees work together.

NASA established the Digital Transformation Office to help the agency leverage data and shape a digital path forward. The office will establish policies, define standards, select enterprise tools, and conduct projects to build and deploy essential capabilities. NASA Stennis leadership affirms this initiative as a high priority and the evolution of the agency's digital capabilities as vital to our ongoing mission success.

## Digital Transformation is Not Just Tools

*Digital Transformation is about our **people reinventing our products, processes, and capabilities** taking full advantage of **data and cutting-edge technologies** to transform **mission outcomes** & enhance **mission success***



### TODAY

*"My" data culture*

*Time spent on "paperwork"*

*Strategic decisions require time-consuming data collection and analysis*

*Industrial partners cannot get access to NASA SharePoint/ MS Teams*

*NASA best large federal agency to work for*

### TRANSFORMED

*"One" data culture*

*Automation frees employee time for more meaningful work*

*Real-time data and model-based analytics drive decisions*

*Work seamlessly with partners from any platform, anywhere*

*NASA is the best place to work, anywhere*

## Stennis News



### NASA Recognizes Stennis Engineer as HEO

To mark progress in NASA's [Artemis program](#) that will return humans, including the first woman and person of color, to the Moon, the space agency's Human Exploration and Operations (HEO) Mission Directorate has been recognizing HEOs performing necessary and critical work. Overall, 16 Stennis Space Center employees have been cited by the NASA directorate for Artemis-related efforts. The latest to be recognized is Ryan McKibben, a NASA test conductor who supported the Space Launch System (SLS) Green Run test series. McKibben was cited June 4 for his expertise that proved highly valuable during procedure development for the wet dress rehearsal and subsequent hot fire tests of the SLS core stage.



# The History of Hurricane Season at Stennis

**H**urricane season begins on June 1 and ends on November 30, and reminders to be prepared are everywhere. Stennis has a hurricane preparedness plan that serves the site well, helping it to survive hurricanes like Betsy in 1965, Camille in 1969, Elena in 1985, Georges in 1998, and Katrina in 2005.

Hurricane Betsy was the first test of being prepared. Betsy formed on Aug. 27, 1965. The then-named Mississippi Test Facility (MTF) watched the storm as it tracked toward the Gulf Coast. The storm only inflicted minor damage on the test facility when it made landfall near Grand Isle, Louisiana, on Sept. 10, 1965, and moved into the Mississippi coast area. MTF reopened the following Monday.

Hurricane Camille made landfall at Waveland, Mississippi, on Aug. 18, 1969. At MTF, the days prior to Camille arriving were spent watching, waiting, securing hydrogen and oxygen barges, and tying down anything that might be blown away in 160 mile-per-hour winds. Camille ravaged the area and MTF, but the Gulf Coast is a resilient community and quickly rebuilt.

Hurricane Elena was a tricky storm to prepare for. It had an unpredictable track, going east in the Gulf of Mexico before doubling back to make landfall near Biloxi, Mississippi, on Sept. 2, 1985. Hurricane warnings were issued, canceled and issued again leading up to that time. The then-National Space Technology Laboratories (NSTL) remained ready, and thanks to efforts of “ride

out crews,” employees who are assigned to “ride out” the storm at the facility, there was little damage to the facility.

Hurricane Georges was an interesting storm, making seven landfalls in all, with its seventh and final landfall on Sept. 28, 1998, near Biloxi. Once again, Stennis Space Center was prepared and only had to rake up and haul off storm debris scattered across the site.

In 2005, Stennis again was as prepared as it could have been, but Hurricane Katrina was like nothing anyone had ever seen. Even veterans of Hurricane Camille had never seen anything quite like it. On Aug. 29, 2005, Katrina made landfall in southeast Louisiana. Thanks to emergency and ride out crews, Stennis, though heavily damaged, quickly was able to get up and running after the storm. Help poured in from across the country and other NASA installations. The community, once again, pulled together to rebuild.

In June 2009, just after the beginning of that hurricane season, a top-level storm response center opened at Stennis. The Emergency Operations Center was officially began operations. The facility has over 78,000 square feet of space that houses the medical clinic, fire department, security services, emergency management control system, and incident command post. It continues to provide a consolidated approach to responding both to hurricanes and tropical storms, as well as other site and area emergencies.



Located on-site at Stennis Space Center, the EOC is the home of the Emergency Operations Center. It enables critical integration by consolidating the center's medical clinic, fire department, security services, energy management control system and incident command post.



## Office of Diversity and Equal Opportunity

# Become an Ally to the LGBTQ+ Community

Lesbian, Gay, Bisexual, and Transgender Pride Month is celebrated annually in June to honor the 1969 Stonewall riots and strives to achieve equal justice and equal opportunity for lesbian, gay, bisexual, transgender, and questioning + (LGBTQ+) Americans. The commemorative month also recognizes the impact that LGBTQ+ individuals have had on history locally, nationally, and internationally.

In 2007, the number of people who said they knew someone who was lesbian, gay, or bisexual was a mere 4 in 10. In the workplace, many organizations were starting to have conversations about the role of allies to the LGBTQ+ community. In

2019, 8 in 10 people said they knew someone who was lesbian, gay, or bisexual – and connections to people who were transgender were constantly growing, with estimates at around 37% of the U.S. population saying they knew someone who was trans-identified.

In 2019, about 50% of LGBTQ+ Americans had experienced discrimination in their personal lives, in places like the workplace, housing, and education. To change these jarring statistics, there needs to be a spectrum of diverse voices expressing support for equality and inclusion – and that includes people who are not members of the LGBTQ+ community. Allies have a unique power to send the message that inclusion and equality are not just things that people in the group affected want, but something that everyone wants.

While some incredible progress has been made towards equality and fairness for people who are LGBTQ+, there is still room for improvement. Full equality cannot happen without support from smart, energetic, compassionate, and dedicated allies.

Allyship is a journey – one that is shaped by diverse personal experiences and backgrounds. No matter where that journey begins, everyone has the potential to be an ally to people who are LGBTQ+. While for some people, being an ally feels like a title that is been with them forever, most allies have a journey to being more supportive, taking action, and owning the role of an ally. Some may be inspired to take the ally journey

because of a specific event – a friend or co-worker coming out to them, for example. Some find that it is just learning more about an issue, like the experiences of LGBTQ+ youth, that inspires them to learn more and get involved. Others may feel that being an ally is just the right thing to do.

The journey to becoming an ally usually entails a

process of learning more, becoming comfortable enough to talk about the issue openly, knowing how to take on pushback, and eventually being able to help others in their ally journeys. Rather than listing requirements to becoming an ally, it is better to look at



the qualities of a good ally, such as:

- **Allies want to learn.** Allies are people who recognize they do not know all that can be known on LGBTQ+ issues or about all the experiences of people who are LGBTQ+ but want to understand more.
- **Allies address barriers.** Allies may grapple with some roadblocks to being openly and actively supportive of people who are LGBTQ+ and are willing to take on the challenge.
- **Allies are people who know that support comes in many forms.** It can mean something super-public, like attending a Pride celebration with a sign reading, “PROUD ALLY.” But it can also mean expressing support in more personal ways through language, conversations, and signals. True allies know that all aspects of allyship are essential, effective, and valued equally.
- **Allies are diverse.** Allies are people who know that there is not just one way to be an ally and that everyone gets to adopt the term differently ... and that is okay.

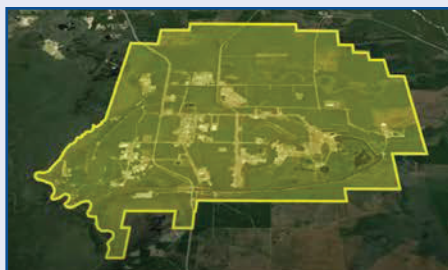
No matter where one is on the journey, or the motivation to get involved, figuring out where to fit on the ally spectrum will help one connect to resources, tools, and support to move forward, continue the journey, and become a great advocate for equality.

*Information in this article came from: [straightforequality.org](http://straightforequality.org).*



# Online Resources

## Stennis Emergency Management

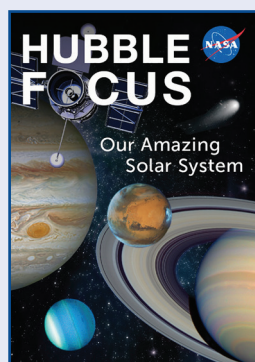


Stennis Virtual Tour

## NASA Coronavirus Response



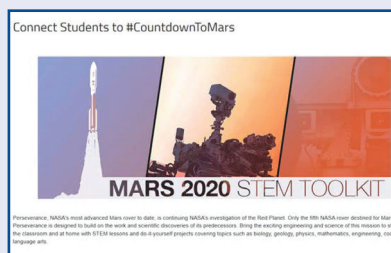
Stennis Fact Sheets



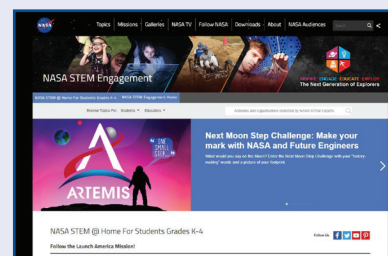
NASA E-Book Downloads



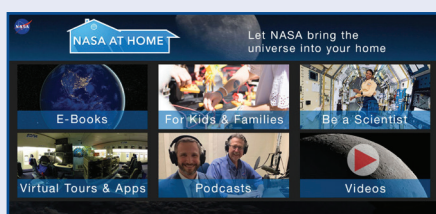
Stennis Artemis Resources page



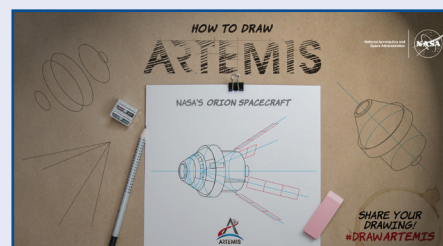
MARS 2020 STEM Toolkit



NASA STEM@Home for Students



NASA at Home



How to Draw Artemis



# Hurricane Guide

The 2021 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 interesting and valuable information, including a contraflow evacuation map 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 2021 storm season may deliver.

## Stennis Space Center WILL NOT serve as a shelter to any workers or families (including families of ride-out personnel).

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

In Mississippi and Louisiana, persons are reminded they may call 211 to obtain information about health and human services available in their areas. The number is staffed 24 hours a day in Louisiana and every day but Sundays, 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.

Employees also should monitor the **Stennis Emergency Management** website for updated information.

## Protect your plan from COVID-19

### Prepare early and double-check details

COVID-19 could have affected many details related to a hurricane preparation plan. Some public shelters may have changed. Some evacuation destinations may not be so easily accessible. Travel may be more difficult. It is critical to review and check all preparation details to make sure they remain viable.

### Expand your emergency kit

In addition to traditional items included in an emergency preparedness kit, this year’s supplies should include items (such as face masks, disinfectants, hand sanitizer) to protect individuals from COVID-19. Check CDC website for information on how to protect oneself and others from the virus.

### Stay informed

With the COVID-19 situation ever changing, it is more critical than ever to stay up-to-date on the latest news and developments. Use apps, including the **FEMA mobile app**, and websites to receive the latest information.

## Facts and Information

- The Atlantic Ocean hurricane season extends from June 1 through November 30 each year, hitting its peak from mid-August to late October. Of the 64 major hurricanes (Category 3-5) that made landfall in the United states during the 20th century, 36 hit in September. The next busiest month was August with 15 storm strikes.
- The terms “hurricane,” “typhoon” and “cyclone” all refer to the same storm tropical cyclone phenomenon. Storms in the Atlantic and eastern Pacific Oceans are called “hurricanes.” Western Pacific Ocean storms are referred to as “typhoons.” Storms in the Indian Ocean and Bay of Bengal are “cyclones.” Australians refer to a tropical cyclone as a “willy-willy.”
- The word “hurricane” comes from “Hurican” or “Huracan,” the name of an evil Caribbean god. It also has roots to Hunraken, the Mayan god of wind, fire and storm who is said to have caused a great flood on Earth as an act of divine retribution against humans.
- A hurricane has remarkable power. It can reach as high as 40,000 to 50,000 feet into the sky, stir up millions of miles of air and produce more than 2.4 trillion gallons of rain a day. During its lifespan, a hurricane produces as much energy as several thousand atomic bombs.
- Hurricanes spin around a low-pressure center known as an “eye.” The eye may be 20-30 miles wide and remains calm and without clouds. It is surrounded by a thick “eye wall,” which represents the strongest part of the hurricane, while spiral rain bands extend out from the wall to represent the largest portion of the storm. A hurricane makes landfall when its eye crosses a coast-line, not when the spiral rain bands arrive.
- The right side of a northern hemisphere hurricane is typically stronger in terms of winds, tornado potential and storm surge.
- **Storm surge** – an abnormal rise of sea/gulf water along a shore as the result, primarily, of storm winds
- **Watch notice** – issued notice that adverse conditions are *possible* in the specified watch area, usually within 48 hours. A watch may apply to thunderstorms, tornadoes, floods or hurricanes.
- **Warning notice** – issued notice that adverse conditions are *expected* in the specified warning area, usually within 36 hours. A warning may apply to thunderstorms, tornadoes, floods or hurricanes.
- Evacuated residents may choose to seek refuge in designated public shelters. Such designated 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 should bring a change of clothing, a blanket and a pillow for each person. Residents also should bring their disaster supply kit, including food, medications, comfort items and needs for infants or elderly persons.
- **What not to bring to a shelter.** No weapons, illegal drugs, alcohol or pets are allowed (service animals are permitted).
- Hurricanes/typhoons/cyclones kill more people than any other type of natural storm. By one estimate, the storms have killed almost 2 million people worldwide during the past two centuries.
- For hundreds of years, hurricanes either were not named or were named on a local and random basis. The United States began using female names for storms in 1953, adding male names in 1979. Separate lists are maintained for Atlantic, Eastern North Pacific and Central North Pacific storms. The lists rotate each year, with listed names in alternating (male/female or female/male) and alphabetical order.
- Names of powerful or destructive hurricanes are permanently retired (by decision of a world committee) from the naming lists and replaced as needed. Since the 1950s, 93 names have been retired, including three in 2020 (Eta, Iota, and Laura).
- Names for 2021 Atlantic hurricanes are – Ana, Bill, Claudette, Danny, Elsa, Fred, Grace, Henri, Ida, Julian, Kate, Larry, Mindy, Nicholas, Odette, Peter, Rose, Sam, Teresa, Victor, and Wanda. The rotating naming lists can be viewed at: <https://www.nhc.noaa.gov/about-names.shtml>.

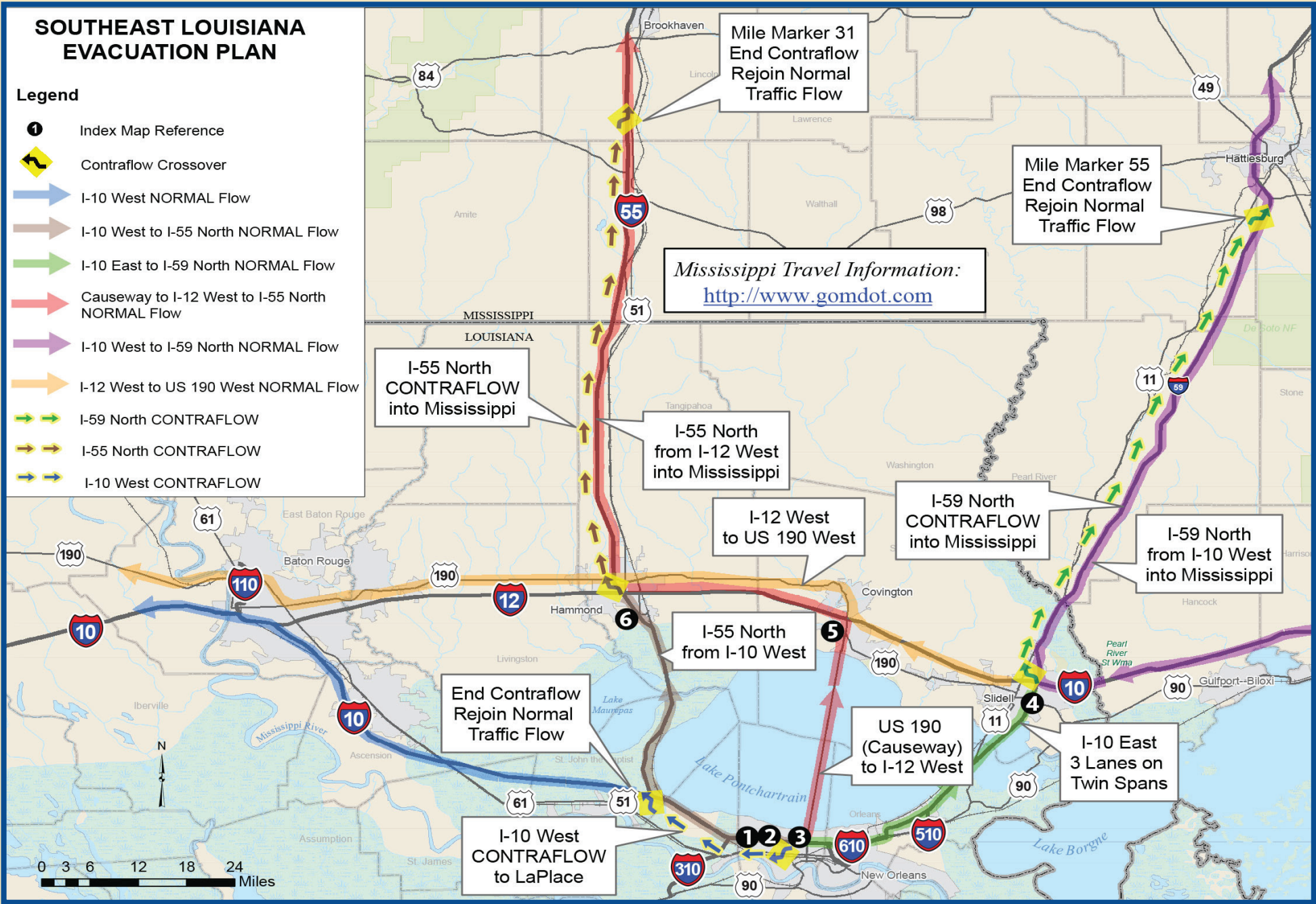


# Louisiana-Mississippi Interstate Contraflow Plan

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 at mile marker 55.

- I-55 contraflow will begin in Louisiana, extend into Mississippi and end at mile marker 31.
- 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. Motorists needing to stop should use the next available exit.
- Motorists traveling west into Louisiana on I-10 will be routed north onto I-59 at the I-10/I-12 split.
- Tune in to public broadcasting radio stations for emergency information and road conditions.
- The following procedures will be enforced in the Hattiesburg area to avoid severe congestion:
  - Northbound traffic on Hwy. 49 may not be allowed to exit at either Hwy. 98 or I-59.
  - Northbound traffic on I-59 can only exit at Hwy. 11 (Exit 60) or west onto Hardy Street/Hwy. 98 (Exit 65).
  - Westbound traffic on Hwy. 98 will not be allowed to exit onto Hwy. 49, but directed to merge onto I-59 instead.



## Stennis Space Center Resource Information

SSC Emergency Management  
[www.sscsos.com](http://www.sscsos.com)

SSC Site Status app  
Available at GooglePlay and iTunes online stores

## National Resource Information

### American Red Cross

[www.redcross.org/hurricane](http://www.redcross.org/hurricane) 800-REDCROSS (733-2767)

### Federal Emergency Management Agency

[www.fema.gov](http://www.fema.gov) 800-621-FEMA (3362)

### NOAA National Hurricane Center

[www.nhc.noaa.gov](http://www.nhc.noaa.gov) [nhc.public.affairs@noaa.gov](mailto:nhc.public.affairs@noaa.gov) (email)

### National Weather Service Forecast Office

(New Orleans) [www.weather.gov/lix](http://www.weather.gov/lix) 985-649-0429 or 504-522-7330  
(Jackson) [www.weather.gov/jan](http://www.weather.gov/jan) 601-936-2189

### U.S. Coast Guard – 8th District (Gulf of Mexico region)

[www.atlanticarea.uscg.mil/Our-Organization/District-8/](http://www.atlanticarea.uscg.mil/Our-Organization/District-8/)

## Mississippi Resource Information

### Mississippi Emergency Management Agency

[www.msema.org](http://www.msema.org) 866-920-MEMA (6362) (24 hrs) 800-222-MEMA (6362)

### Mississippi Department of Transportation

[www.mdot.ms.gov](http://www.mdot.ms.gov) [www.mdottraffic.com](http://www.mdottraffic.com) 866-521-MDOT (6368)

### Mississippi Highway Safety Patrol

[www.dps.state.ms.us](http://www.dps.state.ms.us) 601-987-1212 (\*HP from any cell)

### Mississippi Insurance Department

[www.mid.ms.gov](http://www.mid.ms.gov) 800-562-2957

### Mississippi Power

[www.mississippipower.com](http://www.mississippipower.com) 800-487-3275

### Coast Electric Power

[www.coastepa.com](http://www.coastepa.com) 877-769-2372

## Louisiana Resource Information

### Office of Homeland Security and Preparedness

[www.gohsep.la.gov](http://www.gohsep.la.gov) [www.getagameplan.org/](http://www.getagameplan.org/) 225-925-7500

### Louisiana Department of Transportation

[www.sp.dotd.la.gov/Pages/default.aspx](http://www.sp.dotd.la.gov/Pages/default.aspx) 877-4LA-DOTD (452-3683)

### Louisiana State Police

[www.lsp.org](http://www.lsp.org) 800-469-4828 \*LSP (\*577) from any cell phone

### Louisiana Traveler Information

[www.511la.org](http://www.511la.org) dial 511 in state 88-ROAD-511 (888-762-3511) outside state

### Louisiana Department of Insurance

[www.ldi.louisiana.gov](http://www.ldi.louisiana.gov) 800-259-5300 or 225-342-5900

### Cleco Corporation

[www.cleco.com](http://www.cleco.com) 800-622-6537

### Entergy ([www.entergy-louisiana.com](http://www.entergy-louisiana.com))

800-ENTERGY (368-3749) Power outages: 800-9OUTAGE (968-8243)

### Washington-St. Tammany Electric Cooperative

[www.wste.coop](http://www.wste.coop) 985-839-3562 Power outages: 866-672-9773