



**NATIONAL
WEATHER
SERVICE**

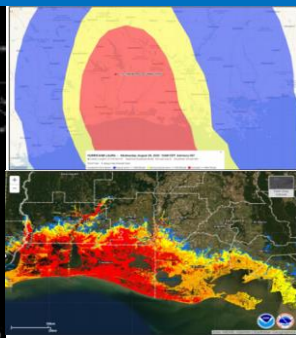
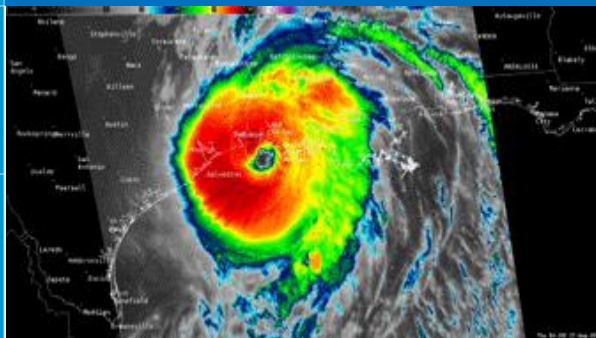
IDSS in Response and Recovery: How NWS Offices Combined to Support Public Safety Messaging for Hurricane Laura

August 23, 2021

NWA 2021 Annual Meeting, Poster #68

Presenter: Barry Goldsmith, Warning Coordination Meteorologist

NWS Brownsville/Rio Grande Valley, TX









Co-Authors/Acknowledgments

- Charles Woodrum, NWS Shreveport, LA
- Roger Erickson, NWS Lake Charles, LA
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...and the operational and supporting staff at each of these offices, as well as core public safety and broadcast media partners in Texas and Louisiana. Without them, success could not be achieved.






Laura: NWS Operational Timeline (2020)




26 Aug, 730 AM: “Last Mile” – NWS Weather Forecast Office (WFO) Lake Charles (LCH) evacuates, WFO Brownsville/Rio Grande Valley (BRO) assumes core functions/pre-landfall operations



26 Aug, 8 PM through 27 Aug, 11 AM: Landfall operations

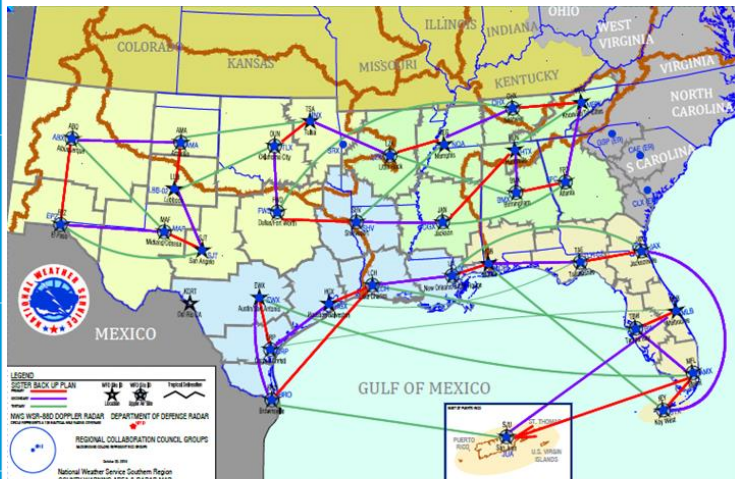


28 Aug through 24 Sep: Multiple NWS Offices provided service backup to LCH until location is restored and safe



Early October: Additional “standby” needed during Hurricane Delta

The Service Backup Plan

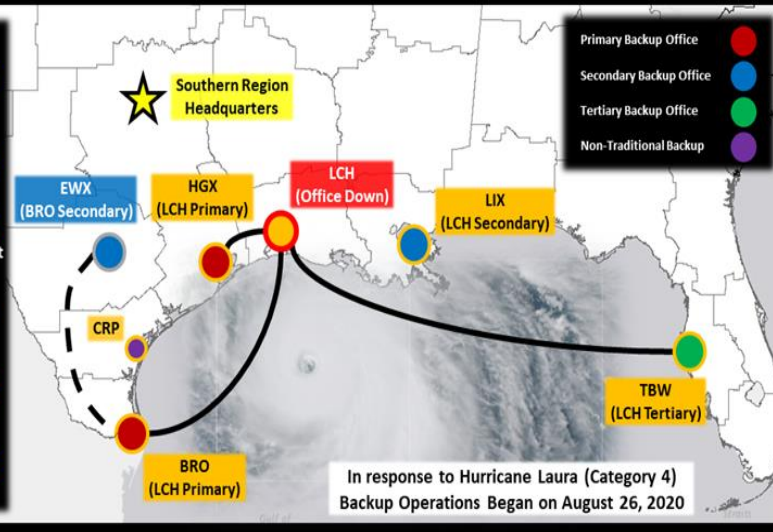


WFO/Brownsville became primary service back-up pairing with WFO/Lake Charles, LA on 07 May 2020.

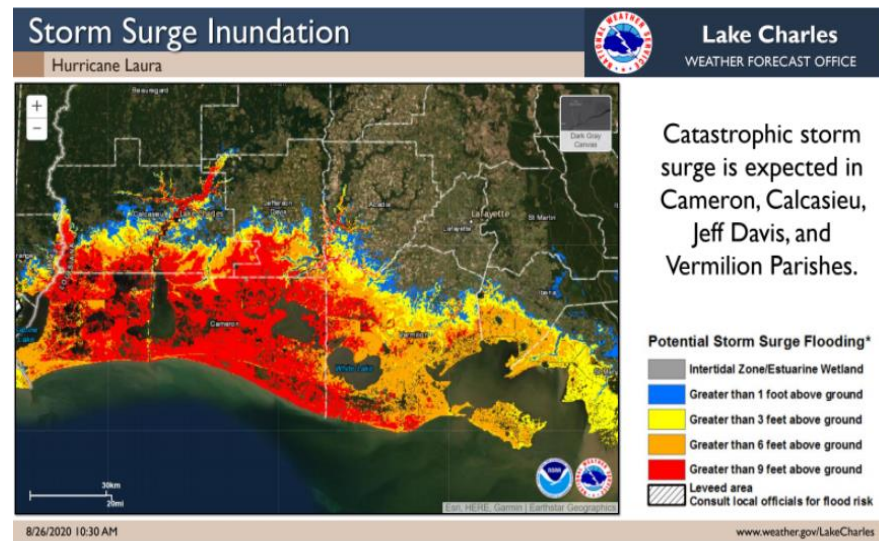
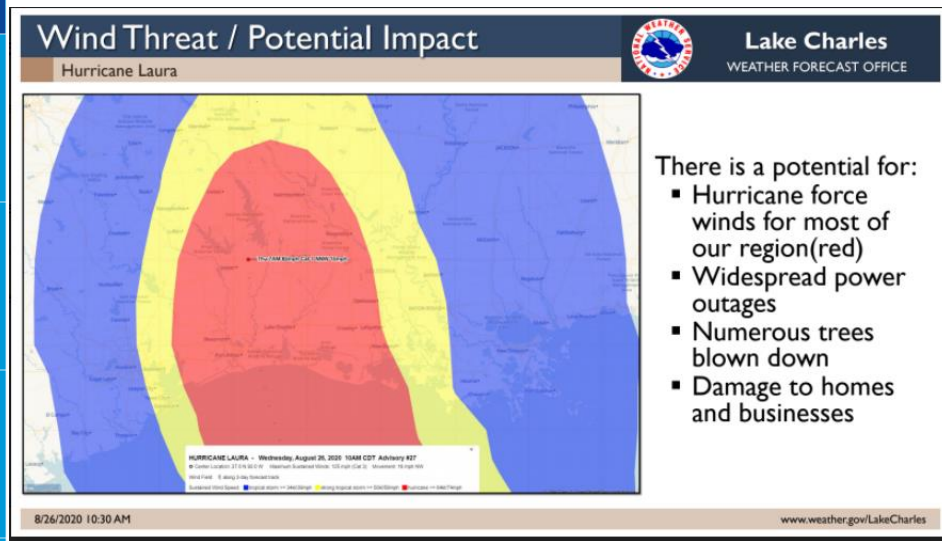
NWS SR Service Backup Operations and Teamwork for WFO Lake Charles



- WFO Brownsville (BRO)**
 - LCH's Grids, Phones, Convective Warnings, DSS/Social Media, and Tropical Products.
- WFO Houston (HGX)**
 - LCH's Hydrologic Products
- WFO New Orleans (LIX) hosted LCH Meteorologists for continued DSS Support and Social Media during Landfall**
- WFO Austin/San Antonio (EWX)**
 - BRO's Aviation, Short Fuse Products
- WFO Tampa Bay (TBW)**
 - LCH's Aviation Forecasts
- WFO Corpus Christi (CRP) provided temporary Social Media assistance**



The Last Mile: Core Partner Service



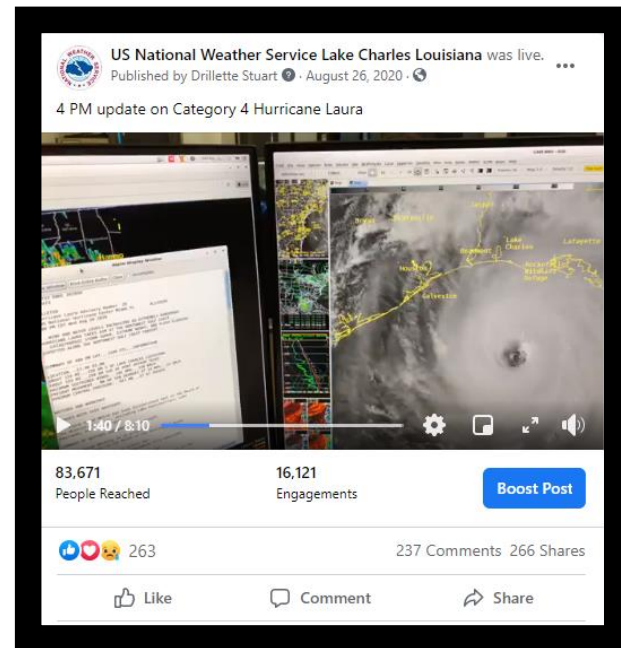
- After Evacuation, NWS LCH Warning Coordination Meteorologist (Erickson) deployed to LCH EOC and provided 2-hour briefings through daybreak, 27 Aug!
- NWS BRO continued to “feed” critical information, such as Hurricane Threats/Impacts graphics and text Hurricane Local Statements and Warnings, through Laura’s exit

The Last Mile: Public Service



- BRO had extra staffing in place to quickly assume duties from Lake Charles (LCH) the morning of 26 Aug
- This included answering **at least two dozen calls** from concerned public, and taking local and national media interviews

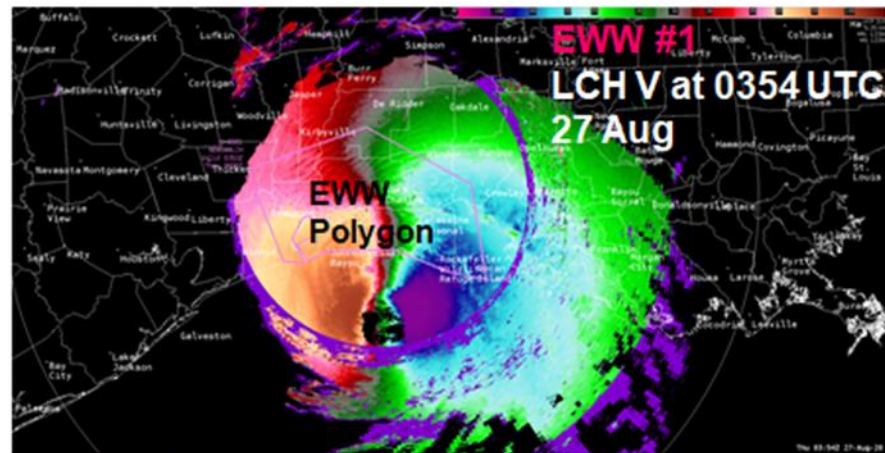
- LCH's **Supplemental Assistance Volunteer Initiative (SAVI)** Guide proved to be an indispensable tool
- BRO took to Facebook Live to update LCH's followers
 - **Urged followers to remain calm and heed evacuation orders**
- Overnight (26 into 27 Aug), LCH handled Facebook Live duties while BRO collected reports as SAVI office



The Very Last Mile: Landfall Warning



NHC intensity 130 knots (150mph)




Radial velocities exceeding ± 122.5 knots

During Hurricane Laura:

- WFO Brownsville/Rio Grande Valley issued an Extreme Wind Warning (for ≥ 115 mph/ 51.4 ms $^{-1}$) during landfall with more than 1 hr lead time

Recovery Phase: Core Partner Service



HURRICANE LAURA BRIEFING


11:30 AM CDT
Thursday, August 27, 2020

Prepared by: Barry Goldsmith, NWS Brownsville/Rio Grande Valley for NWS Lake Charles

What has changed: Location and Strength of Laura

Next Briefing: Wednesday, August 26th, at 6:00 PM CDT

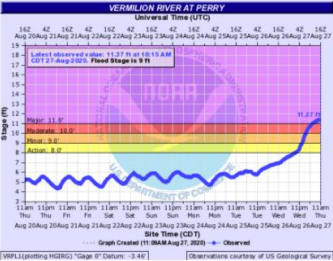
www.weather.gov/LakeCharles



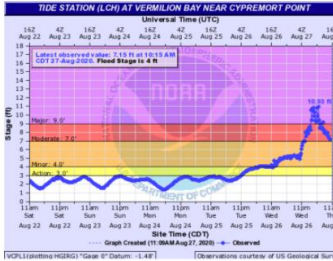
Lake Charles WEATHER FORECAST OFFICE

River/Tidal Flooding

Hurricane Laura




Major flooding at Perry



Storm surge receding to minor flood at Vermilion Bay

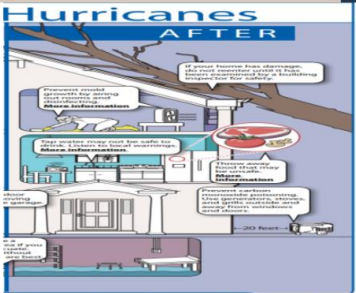
8/27/2020 11:45 AM www.weather.gov/LakeCharles



Lake Charles WEATHER FORECAST OFFICE

Recovery: STAY SAFE!

Hurricane Laura




Hurricanes AFTER

<https://www.cdc.gov/disasters/hurricanes/be-safe-after.html>

www.weather.gov/LakeCharles

8/27/2020 11:45 AM

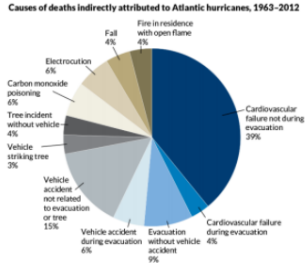


Lake Charles WEATHER FORECAST OFFICE

Final Thoughts

Hurricane Laura

- **The transition from response to recovery phase has begun. Safety is CRUCIAL.**
- **In most cases, more people die indirectly than directly.**
- **Urge residents and others to be safe and patient during the prolonged recovery phase.**



Causes of deaths indirectly attributed to Atlantic hurricanes, 1963-2012

8/27/2020 11:45 AM www.weather.gov/LakeCharles

Recovery Phase:

Message Transition

Generator Safety Tips

Weather Forecast Office
Lake Charles, LA
Issued Aug 28, 2020 7:00 AM CDT

- ❑ Never use a generator indoors or in an attached garage
- ❑ Don't connect your generator directly to your home's wiring
- ❑ Don't plug a portable generator into an electrical outlet in your home or garage
- ❑ Don't overload the generator
- ❑ Make sure your generator is properly grounded
- ❑ Do not store gasoline for the generator indoors
- ❑ Read and adhere to the manufacturer's directions for safe operations



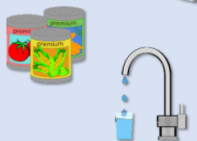
@NWSLakeCharles

weather.gov/lch

Food and Water Safety

Weather Forecast Office
Lake Charles, LA
Issued Aug 27, 2020 3:30 PM CDT

- ❑ If power is out, keep fridge/freezer doors closed
- ❑ Get rid of food that
 - Is in an open, damaged, or bulging can
 - Has an abnormal smell, color or texture
 - Needs to be refrigerated but has risen above 40°F
- ❑ Clean off cans that came in contact with flood water
- ❑ Ask local officials about local water safety. If water is unsafe:
 - Bring water to a rolling boil for 1 minute before use
 - Add 1/8 tsp of new, unscented bleach to 1 gal of water and let sit for 30 minutes before use
 - Use water purifying tablets (follow tablet directions)



@NWSLakeCharles

weather.gov/lch

Preventing Injury After Storms

Weather Forecast Office
Lake Charles, LA
Issued Aug 27, 2020 4:05 PM CDT



Prevent carbon monoxide poisoning

- Never use generators, power washers, grills or other gasoline burning devices inside your home.



Use chain saws safely

- Wear appropriate protective equipment, such as hard hat, safety glasses, hearing protection. Be sure that bystanders are at a safe distance from cutting.



Avoid electrical hazards

- Never make contact with power lines, regardless of whether they are on the ground or intact.



Be aware of hazardous materials

- Call the fire department to inspect or remove chemicals or other dangerous materials. Wash skin that came in contact with hazardous materials.

More information: <https://www.cdc.gov/disasters/injury/facts.html>

@NWSLakeCharles

weather.gov/lch

WFO BRO reached out to WFO New Orleans/Baton Rouge for guidance with these graphics, then redeveloped them for use after Laura

- Each were shared among NWS offices as well as core partners; posted as “tabs” on LCH/WFO Shreveport webpages

Recovery graphics were “pinned” at the top of the LCH Facebook and and Twitter pages

- These graphics, when shared, attained reaches generally between **65k-105k users**



Recovery Phase: Message Transition

Should I return home?



- Do my state and local officials say it's safe?
- Will I be able to communicate once I'm there?
- Does my neighborhood have power?
- Can I access food, water, and healthcare? Are stores open?
- Is there a safe route home?
- Do I have a backup place to stay?

If no, don't go.

SAFETY TIPS DURING POWER RESTORATION

- Avoid power lines and wires that are sparking, even if you are in a vehicle.
- If you see sparking wires, call 911.
- Keep children away from electrical equipment and power lines.
- Do not connect your generator directly to your home's wiring.
- Do not plug your generator into a regular household outlet or socket.
- If you see utility trucks in your neighborhood, turn off your generator to keep technicians safe while they work.
- Do use a power inlet box and transfer switch to connect to your home wiring.
- Do use extension cords to connect electrical devices directly to your generator.

US National Weather Service Lake Charles Louisiana
Published by Drillette Stuart · August 27, 2020

Shelter in Place warnings remain in effect until further notice for the Westlake/Moss Bluff/Sulphur areas due to an ongoing chemical fire. Louisiana State Police are responding to the event have shut down areas of I-10 near the fire.

14,102
People Reached

730
Engagements

Boost Post

68

14 Comments 57 Shares

Like

Comment

Share

NWS Lake Charles
@NWSLakeCharles

The US Army Corps of Engineers is providing temporary roofing for portions of the area impacted by Hurricane Laura. This is a free service to homeowners. The website and number for the program are: usace.army.mil/BlueRoof/ and 1-888-766-3258

USACE HQ @USACEHQ · Sep 1, 2020

Operation Blue Roof is a priority mission managed by USACE for @fema. This is a free service to homeowners. To learn more about #BlueRoof following Hurricane #Laura, visit: usace.army.mil/BlueRoof/

Note: Video is archival prior to social distancing requirements

can help you temporarily protect your home from further damage before you make permanent repairs.

1:09 2.8K views

10:30 AM · Sep 2, 2020 · TweetDeck



Recovery Phase: Heat Safety

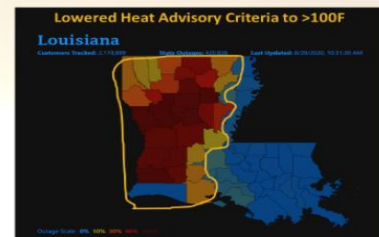
Prolonged Heat Concern

- Temps in the 90s with heat indices in the 100-115F range Friday through the weekend.
- As early as Thursday, August 27th, it was identified that marginal heat advisory level heat would be an issue due to widespread power outages in Louisiana and Texas.
- The extra heat-related illnesses due to power outages and heat stresses in recovery efforts were highlighted in Heat Advisories on the 27th.



Before continued...

- On August 28th, the lengthy duration of power outages became more evident.
- Neighboring offices (LCH/LIX/LZK) were asked to consider this and a consensus was reached to recommend to our partners that we lower our criteria to 100F.



During – Messaging the Prolonged Heat Threat

NWS Shreveport @NWSShreveport · Aug 29
We have temporarily lowered our Heat Advisory criteria to heat indices at 100F or greater for our counties and parishes with 10% of residents with power outages from Laura. Everyone outdoors and those without power are encouraged to take extra breaks and drink extra water.

NWS Lake Charles @NWSLakeCharles · Aug 29
We are expecting a hot day across the area as we continue to clean up from Laura. Please make sure you take precautions and stay safe from the heat. Learn how to protect yourself and your loved ones: [weather.gov/hot](#) #HurricaneLaura #Heat

NWS New Orleans @NWSNewOrleans · Aug 29
Do you have friends/family working to repair/save their homes in Laura's wake? Are you heading over to help? With no reliable access to A/C, anyone working in the heat will be susceptible to heat stress/heat illness. #HurricaneLaura #Heat

NWS Shreveport @NWSShreveport · Aug 29
Many in the area are still experiencing power outages. Heat will be a concern today again with heat index warnings to the 100-110 degree range. Here are some safety tips from the CDC to avoid carbon monoxide poisoning if you have a generator. #HurricaneLaura #Heat

NWS Lake Charles @NWSLakeCharles · Aug 29
With the extreme heat in combination with cleanup efforts make sure you can recognize the symptoms of heat stress. The image below will tell you what to look for and what to do. #Heat #HeatStress

Practice HEAT SAFETY Wherever You Are

HEAT-RELATED ILLNESSES

HEAT EXHAUSTION

US National Weather Service Lake Charles Louisiana
Published by Ray Patrick · August 30, 2020
Heat advisory in effect for Monday from 9 AM to 8 PM. Heat index values from 101 to 110 degrees.

Heat Advisory In Effect Monday
Heat Index Values Ranging from 101 to 110 Degrees
Issued Aug 30, 2020 7:20 PM CDT

Heat Advisory from 9 AM to 8 PM Monday

307,721 People Reached | 27,313 Engagements | 277 Reactions | 201 Comments | 3K Shares

- WFO BRO issued around 15 Heat Advisories with this new criteria through 15 September
- For more information, reference Poster #108: *Impact-Based Heat Messaging after Hurricane Laura*



Key Findings

- NWS Southern Region's robust service backup plan and pre-season testing was crucial for office readiness to support the mission for Laura
- NWS message consistency for a devastating to catastrophic outcome during the final hours before landfall was critical to evacuation and life protection, no matter which office it originated from
- Rapid transition of multi-platform messages from direct impacts to recovery/post-storm safety helped protect life, even though there were more than two dozen fatalities
- Temporary, recovery-driven alteration of traditional NWS Heat Advisory criteria was implemented to increase awareness of numerous communities without power