



Background

In late September 2024, Hurricane Helene dropped up to 30 inches of rain in the mountainous area of western North Carolina, causing severe destruction to both infrastructure and residential areas. NCDOT used the Highway Emergency Link Platform (HELP) during and in the immediate aftermath to warn its residents of dangerous areas and situations caused by Helene.

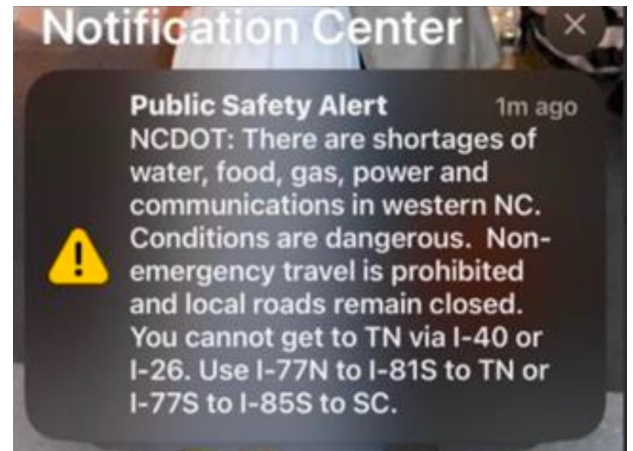
HELP Alerts was developed by Information Logistics (ILOG) and uses INRIX Traffic data. It establishes direct one-way and two-way communications with travelers during roadway closures or other emergencies.

Prior to Helene, NCDOT issued four wireless emergency alerts (WEAs) in 2024. Between October 1st and October 16th, 2024, NCDOT issued and renewed 28 separate WEAs over the 16-day period. Many of the WEAs were warnings to travelers to stay away from specific areas because travel was impossible and/or the areas were experiencing shortages of water, food, gas and power. NCDOT reissued many of the WEAs because the hazardous situations in many geofenced areas had not been resolved within the normal 24-hour WEA time limit. NCDOT used HELP Alerts to issue and reissue the same WEAs to the hardest hit areas for up to nine days.

- **Proven:**
NCDOT issued 28 alerts in 16 days to drivers.
- **Fast Approval:**
NCDOT deployed alerts quickly with streamlined coordination with EMA.
- **Targeted Alerts:**
Sent timely warnings to travelers in specific areas.
- **No App Needed:**
Reached all mobile users without downloads or subscriptions.
- **Always Improving:**
ILOG is adapting to feedback with enhanced geo-fencing and cross-border options..

Successes

Using HELP Alerts, NCDOT provided travelers in specific geo-fenced areas with detailed information that alerted them to closed and dangerous roadways. This allowed the travelers to stay clear of hazardous areas and not create a situation that would require additional first responders to be deployed. Alerts were quickly issued to all cellphones within the defined areas. There were no requirements that travelers have an app or any other service subscription. NCDOT and the Emergency Management Agency (EMA) coordinated approvals so that the WEAs were approved within moments of issuance, ensuring timely information to users. One NCDOT staff member was even able to manage alerts while traveling overseas.



Challenges

Helene caused destruction across state borders. However, NCDOT was only able to issue WEAs within the state, as WEAs cannot be issued outside of agency jurisdiction without prior approval and coordination with FEMA.

NCDOT also encountered some issues with travelers receiving WEAs outside of the geofenced area or not receiving them when/where expected. Due to the severity of the situation, cell towers were disrupted, and temporary cell towers may have been put in place to handle cell traffic. Both situations impact the receipt of WEAs.

NCDOT had a couple of technical difficulties due to highly complex geofences, so based on this feedback, system updates are in process to permit more complex geo shapes in the future.

Takeaways

NCDOT was able to effectively use the HELP Alerts system in an unprecedented manner for them, both in terms of the number of geographic areas being affected simultaneously, and the length of time it was necessary to warn travelers about a hazardous situation. The NCDOT team adjusted its use of HELP Alerts to issue WEAs as a preventative measure before travelers encountered dangerous situations. Moving forward, it may be helpful to have plans in place with adjoining states that would allow for quick FEMA approval of WEAs that cross state lines. It would also be beneficial to evaluate re-issuance of WEAs every 24 hours vs. issuing a longer-term WEA.



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