



Making Alerts Actionable and Understandable: Moving to Plain Language and Streamlining Warning Updates

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NATIONAL WEATHER SERVICE

HAZARD SIMPLIFICATION PROJECT (HazSimp)

The NWS has made the decision to replace “Advisory” and “Special Weather Statement” terminology from the Watch, Warning, and Advisory (WWA) system with **plain language headlines**.



WHY IS THIS BEING CHANGED?

According to social science, the term Advisory is especially confusing.



*“Is this as bad as a Warning?”
“Is this a downgrade from a Watch?”
“What are you advising me to do?”*

One goal of HazSimp is to convey plain language in NWS displays without adding a third term.



weather.gov/hazsimp

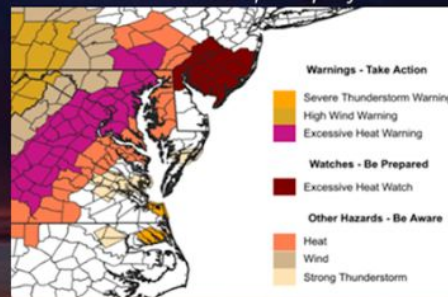
WHAT WILL THIS LOOK LIKE?

New text headlines led by the HAZARD NAME:

SNOW: Hazardous travel in snow and blowing snow from 9am to 8pm

HEAT: Heat index values up to 100F until 4pm

National Map Display



Local Forecast Page



Haz Simp: Consolidation and Reformatting

Product Consolidation

Winter

- Three Winter Weather Advisories to one
- Three Winter Storm Watches to one

Marine

- Four Small Craft Advisories to one

Flood

- Five Flood Advisories to one
- In most cases, Flash Flood Watch and Flood Watch consolidated to Flood Watch

Non-Precipitation

- Wind Chill product suite consolidated with Extreme Cold product suite
- Excessive Heat Watch and Warning rename to “Extreme” Heat
- Hard Freeze Watch and Warning removed

Product Reformatting

“What, Where, When, Impacts” (3W)

Winter Storm Watch

WHAT...Blizzard conditions possible. Winds gusting to 50 to 60 mph could cause whiteout conditions.

WHERE...Plymouth County

WHEN...Until 8 PM EDT this evening.

IMPACTS...Travel could be dangerous. Wet snow and strong winds could result in power outages and tree damage.

Impact-Based Warnings (IBW)

Flash Flood Warning

HAZARD...Heavy rain producing flash flooding.

SOURCE...County officials and radar estimates.

IMPACT...The Howard 911 Center reported flooding on Main Street in Ellicott City. Please seek higher ground immediately.

FLASH FLOOD...RADAR INDICATED
FLASH FLOOD DAMAGE THREAT...CONSIDERABLE

Damage threat tags with WEA trigger for highest levels

New Plain Language Headline Structure

SNOW: Hazardous travel in snow and blowing snow from 9AM to 8PM



HEAT: Heat index values up to 100F until 4PM



HIGH SURF: Unusually high surf from 6AM to 12PM



FLOOD: Ponding of water in low-lying and poor drainage areas from 3PM to 8PM

STRONG THUNDERSTORM: Gusty winds and hail will impact XX county through 2PM



FIRE WEATHER CONDITIONS: Gusty winds will cause fires that are difficult to control from TIME 1 to TIME 2



BLOWING SNOW, ICE, WINTRY MIX, FREEZING FOG, COLD, FROST, POOR VISIBILITY, DUST, BLOWING DUST, ASHFALL, WIND, STAGNANT AIR, LAKE WIND, FREEZING SPRAY, HIGH WATER, LOW WATER, MARINE WEATHER, RIP CURRENTS, BEACH HAZARD



Winter Weather Advisory transition

To....

Plain Language

/O.NEW.KBMX.WW.Y.0001.200208T1000Z-200208T1700Z/
Cherokee-
Including the city of Centre
815 PM CST Fri Feb 7 2020

...WINTER WEATHER ADVISORY IN EFFECT FROM 4 AM TO 11 AM CST
SATURDAY...

- * WHAT...Total snow accumulations of up to one inch.
- * WHERE...Northern Cherokee County.
- * WHEN...From 4 AM to 11 AM CST Saturday.
- * IMPACTS...Plan on slippery road conditions.

/O.NEW.KBMX.WW.S.0001.200208T1000Z-200208T1700Z/
Cherokee-
Including the city of Centre
815 PM CST Fri Feb 7 2020

VTEC

Plain language headline

...SNOW: Hazardous travel from 4 AM to 11 AM CST Saturday...

- * WHAT...Total snow accumulations of up to one inch.
- * WHERE...Northern Cherokee County.
- * WHEN...From 4 AM to 11 AM CST Saturday.
- * IMPACTS...Plan on slippery road conditions.

Bullet format

Special Weather Statement (SPS) transition

To...

Plain Language

North Snowy Range Foothills-
Including the cities of Arlington and Elk Mountain
1143 PM MDT Mon Sep 23 2019

...Strong westerly winds until this evening...

Strong westerly winds will pick up this morning by 7 AM and
continue through the day, finally diminishing by 6 PM.
Sustained winds around 30 mph with gusts of 45 to 50 mph are
possible.

/O.NEW.KCYS.WI.S.0001.190923T0543Z-190923T0000Z/
North Snowy Range Foothills-
Including the cities of Arlington and Elk Mountain
1143 PM MDT Mon Sep 23 2019

Now with
VTEC

Plain language & time stamp

...WIND: Strong westerly winds 7 AM to 6 PM CST Tuesday...

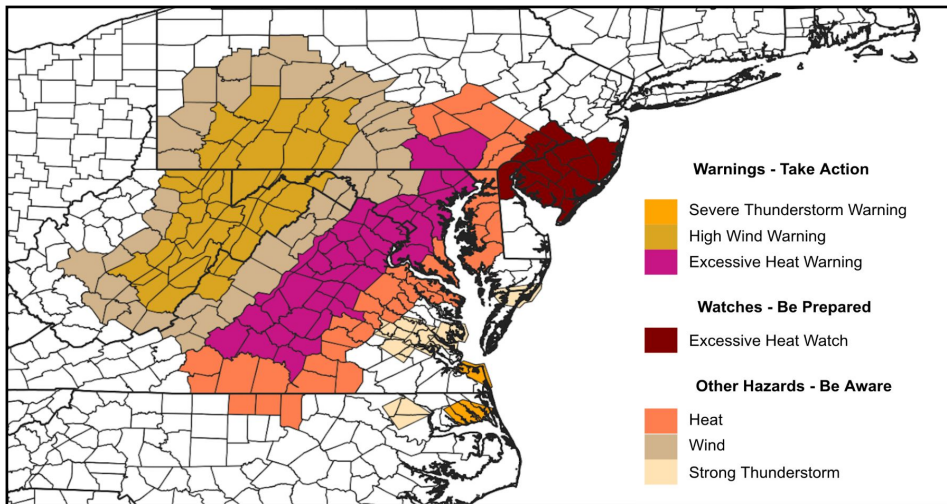
- * WHAT...Sustained winds of 30 mph with gusts of 45 to 50 mph.
- * WHERE...North Snowy Range Foothills.
- * WHEN...Tuesday 7 AM to 6 PM.
- * IMPACTS...High profile vehicles will be most impacted.

Now with "3W"
bullets!



Display of plain language

National Map Colors and Legend



Local Forecast Page

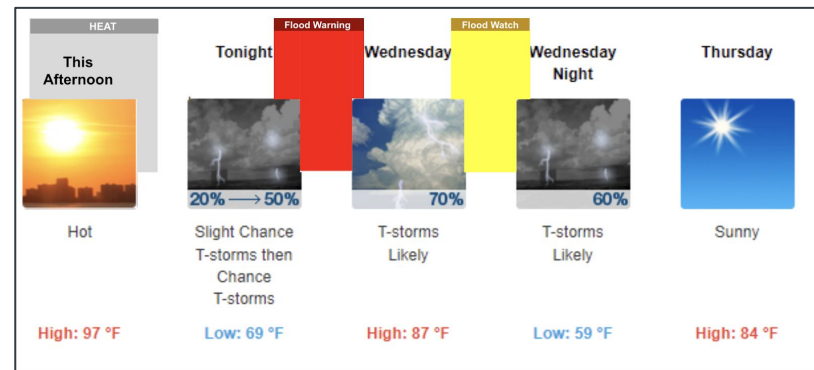
Hazardous Weather Conditions

[Flood Warning in effect from June 14, 11:00 PM until June 15, 5:00 AM CDT](#)

[Flood Watch in effect from June 15, 11:00 PM until June 15, 2:00 AM CDT](#)

[HEAT: Heat index values up to 100F from June 14, 11:00 AM until June 14, 08:00 PM CDT](#)

Hazardous Weather Outlook





Updating Warnings with Warnings



Currently, NWS uses “Statement” products to update/expire/cancel short-fuse warnings.

Haz Simp will include a change to this practice:



- Follow-up information for these warnings will be issued using the same product (within the same PIL) as the initial warning.
- Use of the following Statements *as update tools* will be discontinued:
 - **Severe Weather Statement (SVS)** - updates Tornado Warning, Severe Thunderstorm Warning, and Extreme Wind Warning
 - **Flood Statement (FLS)** - updates the Flood Warning
 - **Flash Flood Statement (FFS)** - updates the Flash Flood Warning
 - **Marine Weather Statement (MWS)** - updates the Special Marine Warning



Example: A Tornado Warning follow-up will be issued as a TOR, not an SVS.



NOTE: This change will NOT impact the way Warnings and their updates go out on EAS and WEA.





Updating Warnings Example



Initial Warning

WUUS52 KCHS 171822

SVRCHS

GAC267-171915-

/O.NEW.KCHS.SV.W.0110.191217T1822Z-191217T1915Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED

Severe Thunderstorm Warning

National Weather Service Charleston SC

122 PM EST Tue Dec 17 2019

The National Weather Service in Charleston has issued a

* Severe Thunderstorm Warning for portions of...
Tattnall County in southeastern Georgia...

Current: Warning update

WUUS52 KCHS 171845

SVSCHS

Severe Weather Statement

National Weather Service Charleston SC

145 PM EST Tue Dec 17 2019

GAC267-171915-

/O.CON.KCHS.SV.W.0110.000000T0000Z-191217T1915Z/

Tattnall GA-

145 PM EST Tue Dec 17 2019

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 215 PM EST
FOR TATTNALL COUNTY...

At 144 PM EST, a severe thunderstorm was located over Mendes, moving
northeast at 40 mph.

Future: Warning update

WUUS52 KCHS 171845

SVRCHS

Severe Thunderstorm Warning

National Weather Service Charleston SC

145 PM EST Tue Dec 17 2019

GAC267-171915-

/O.CON.KCHS.SV.W.0110.000000T0000Z-191217T1915Z/

Tattnall GA-

145 PM EST Tue Dec 17 2019

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 215 PM EST
TATTNALL COUNTY...

At 144 PM EST, a severe thunderstorm was located over Mendes, moving
northeast at 40 mph.



Benefits of Haz Simp Changes

Plain language:

- Removes the most confusing term from our alerting system
- Emphasizes the hazard and impact rather than a term - puts the bottom line up front
- Easier to translate the plain language into other languages and dialects

Education: Emphasizes Watch and Warning terms and makes them easier to educate - it's either possible or happening

Consistency and Tracking:

- Improves machine readability, tracking, and consistency of information currently contained within the Special Weather Statement (SPS)
- Improves tracking of short-fused warning updates





The Path Forward Towards Implementation



**We are
here**



2022

2023

2024

2025+

***DRAFT Technical,
Dissemination, and
Display specifications***

***Partner Engagement, Public
Survey & FINAL
specifications***

***Develop plan for outreach and
training***

***Development and
implementation***

2021 Decision: Replace
“Advisory” with plain
language headlines

**Submit internal
specifications**

Note: Above timeline is according to calendar year





THANKS!

Questions and Comments?

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