



NWS Hazard Simplification Project

WMO CAP Meeting, Geneva



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WATCH

WARNING



WARNING

WATCH
ADVISORY



WARNING

The NWS Watch, Warning, Advisory (WWA) System

Headline Term Definitions

Watch

We **FORECAST THE POTENTIAL** for a significant hazard. Timing and/or occurrence is still uncertain.

Warning

We **WARN FOR A DANGEROUS** hazard that is imminent or occurring. Significant threat to life and/or property.

Advisory

We **ADVISE CAUTION** for less serious hazards that are also imminent or occurring - but could pose a threat to life and/or property if caution is not exercised.

The NWS Watch, Warning and Advisory System: Issues Related to Confusion

Confusing terms



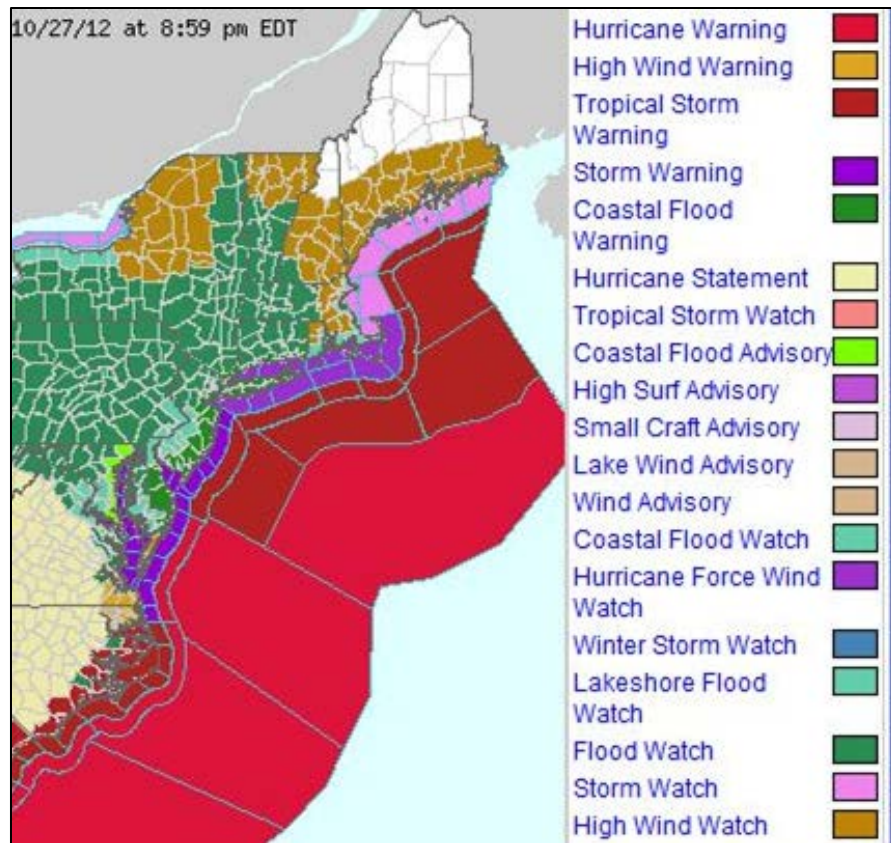

Too many products

The NWS WWA System: Service Assessment Feedback on Message Complexity

Hurricane/Post Tropical Cyclone Sandy: "...NWS products for coastal storms are confusing..."

19 products to describe 2 hazards:

Wind and *Flood*



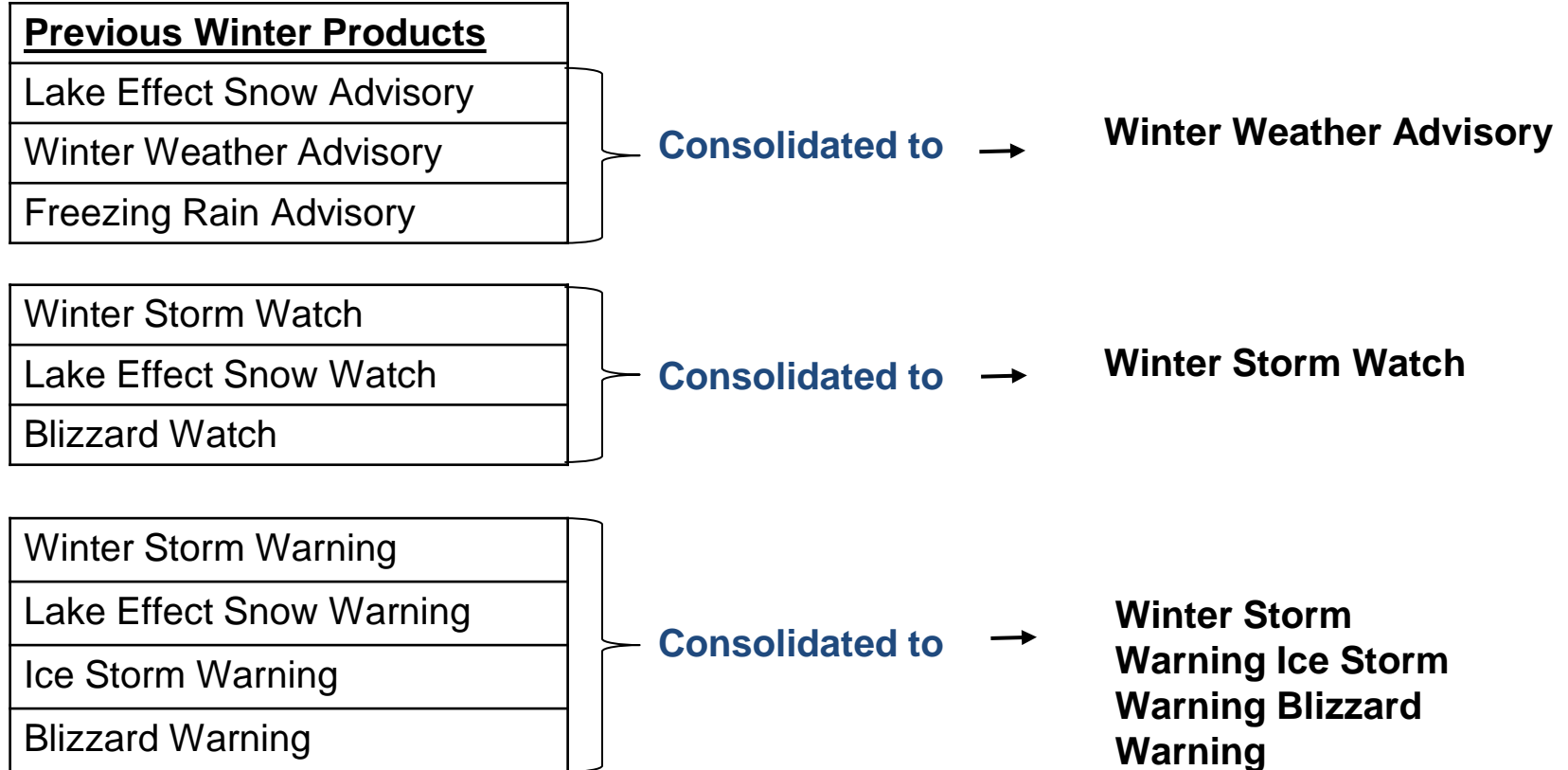
"Sandy" - Oct. 27th, 2012 at 8:59pm

Examples of How We “Retrofitted” CAP to Our Existing Products

| Alert Name | CAP Urgency | CAP Severity | CAP Certainty | Response Type | Event Code |
|----------------------|-------------|--------------|---------------|---------------|------------|
| Extreme Wind Warning | Immediate | Extreme | Observed | Shelter | EWW |
| Flood Watch | Future | Severe | Possible | Prepare | FFA |
| Flash Flood Watch | Future | Severe | Possible | Monitor | FFA |
| Flood Watch | Future | Severe | Possible | Prepare | FLA |
| Flash Flood Warning | Immediate | Severe | Likely | Avoid | FFS |
| Flash Flood Warning | Immediate | Severe | Likely | Avoid | FFW |
| Flood Warning | Immediate | Severe | Likely | Avoid | FLS |
| Flood Advisory | Expected | Minor | Likely | Avoid | NWS |

Repair: Initial Winter Consolidation

Completed: Oct. 2, 2017



Generalizable Public Surveys

Public Understanding and Response

What: Series of surveys using a representative sample of the general public.

Why: Address two major questions...

1. Does the public understand current headlines (Watch, Warning, Advisory)?
2. How does the public respond to alternative headlines?

Question 1 Results:

| Term Used in Question | Response Options | | |
|-------------------------|--|---|---|
| | A storm is possible, and may pose a threat to life and/or property | A storm is certain, and may pose a threat to life and/or property | A storm is certain, but does not pose a direct threat to life and/or property |
| Winter Storm Warning | 43.9% | 43.1% | 13.0% |
| Winter Weather Advisory | 60.6% | 24.9% | 14.5% |
| Winter Storm Watch | 70.6% | 18.6% | 10.8% |

Possible End-State Options

Based on Previous Engagement and Survey Results

Current System

| |
|------------|
| Watch |
| Advisory |
| Warning |
| Emergency* |

Option 1 Color Hierarchy

| |
|----------------|
| Notice |
| Orange Warning |
| Red Warning |
| Emergency |

Option 2 No "Advisory"

| |
|-------------------|
| Notice |
| No Advisory level |
| Warning |
| Emergency |

Option 2a Focus Groups

| |
|--------------------------------------|
| Add "Outlook"? |
| Extend "Notice" to cover "Advisory"? |
| Warning |
| Emergency |

*Tornado and Flash Flood only

Reformatting Examples

Impact-Based Warnings (IBW)

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.

666
LAT...LON 4259 9585 4291 9565 4291 9550 4283 9538
4269 9539 4256 9569 4256 9577
TIME...MOT...LOC 0023Z 225DEG 27KT 4260 9567

TORNADO...OBSERVED
TORNADO DAMAGE THREAT...CATASTROPHIC
HAIL...1.50IN

“What, Where, When, Impacts” (3W)

WHAT...Blizzard conditions. Winds gusting to 50 to 60 mph will cause whiteout conditions in blowing snow.

WHERE...Plymouth County

WHEN...Until 8 PM EDT this evening.

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

Applying CAP to a New System (?)

| | | | |
|--------------------------------------|---------------------------------|--|--|
| Extreme - Emergency Level | N/A | N/A | High Wind Emergency |
| Severe - Warning Level | High Wind Notice (Outlook) | High Wind Notice (Watch) | Red Warning for High Wind |
| Moderate - Advisory Level | High Wind Notice (Outlook) | High Wind Notice (Watch) | Orange Warning for Gusty Winds |
| Minor - Not "Flagship" | No Headline | In Forecast Only: Windy conditions likely tonight | In Forecast Only: Windy conditions today |
| | Possible - Outlook Level | Likely - Watch level | Observed (Occurring/Imminent) - Warning Level |



Thank you!

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<https://www.weather.gov/hazardsimplification/>

