



Driving Awareness of Hazardous & Impactful Weather

Working Collaboratively with Governments to Save Lives Globally

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AccuWeather's Mission Starts:

*“To save lives, protect property,
and help people prosper...”*

We are proud to share a common public service mission with
NMHS and governments



Unique & Mutually Beneficial Partnerships

- Through cooperation (in many cases using the CAP format), we have the opportunity to make a difference in the lives of users by quickly and accurately delivering critical weather and natural disaster warnings!
- Supplements existing warning delivery from NMHS
- Our goal today: share insights based on our unique experience working in partnership with governments around the world!



WE ARE THE WORLD'S LARGEST & FASTEST GROWING WEATHER COMPANY

WORKS WITH
245 OF THE
FORTUNE 500
& THOUSANDS MORE



AVAILABLE ON MORE THAN
1.5 BILLION MOBILE AND SMART DEVICES

ANSWER 35 BILLION
DATA REQUESTS EACH DAY

SAVED TENS OF THOUSANDS
OF LIVES ACROSS THE U.S. & GLOBALLY



FEATURED ON
180,000+ WEBSITES
AND **100+ TV STATIONS**

GROWING CABLE NETWORK AIRING
TO 5.6 MILLION
VERIZON AND
FRONTIER HOMES



FEATURED ON
900+ RADIO STATIONS
AND **700+ NEWSPAPERS**

*Source: comScore



The AccuWeather Team

- The world's leading weather media company
- 500+ employees, including more than 115 meteorologists
- 56+ years of global forecasting experience
- Offices: Global Headquarters in State College, PA, plus: New York City, Wichita, Oklahoma City, Montreal, Tokyo, Dublin, Seoul, Beijing and Mumbai.





More Than 55 Years of Strategic Partnerships





Global Weather Enterprise Role in Weather Preparedness

- A **continuing need** exists for **advancements** in awareness, preparation, and response to weather by the public.
- At times **misalignment** exists between **weather event risks** and the degree to which **consumers prepare and react**.
- Weather across the globe continues to cause **preventable casualties**.
- Studies show consumers acknowledge their **concerns about dangerous weather** and desire more **safety & preparedness education**.



Weather Safety & Preparedness Program

Unique to Global Weather Enterprise



AccuWeather
READY

*To keep the world's people prepared by
empowering them with the most accurate &
actionable information before, during, and after
impactful weather events.*

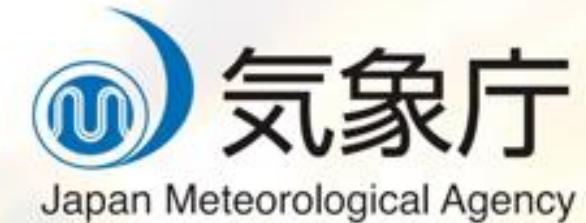




Worldwide Government Partnerships



KMA
Korea Meteorological Administration



ECMWF
EUROPEAN CENTRE FOR MEDIUM RANGE WEATHER FORECASTS



INSTYTUT METEOROLOGII
I GOSPODARKI WODNEJ
PAŃSTWOWY INSTYTUT BADAŃCZY



Environment and
Climate Change Canada



Australian Government
Bureau of Meteorology



Deutscher Wetterdienst
Wetter und Klima aus einer Hand



INMET
Instituto Nacional
de Meteorología



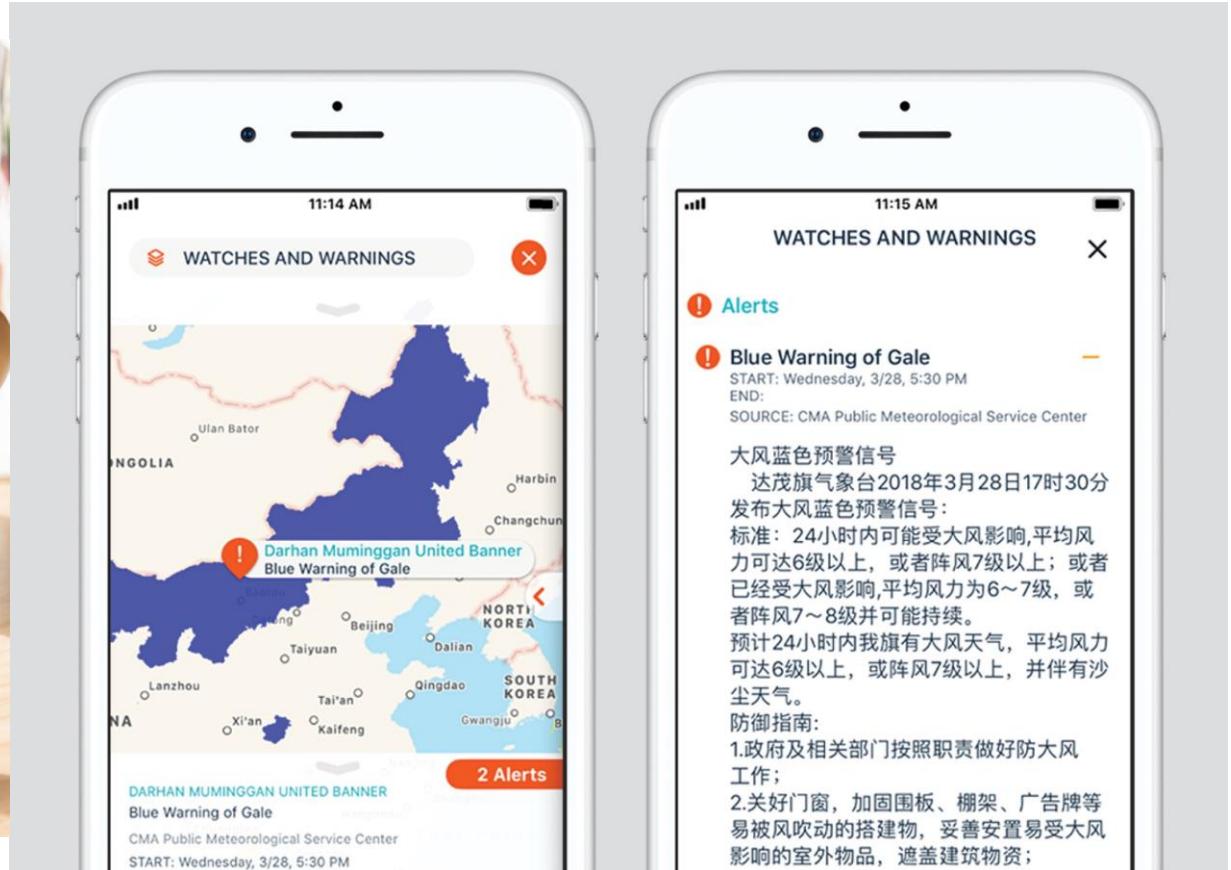
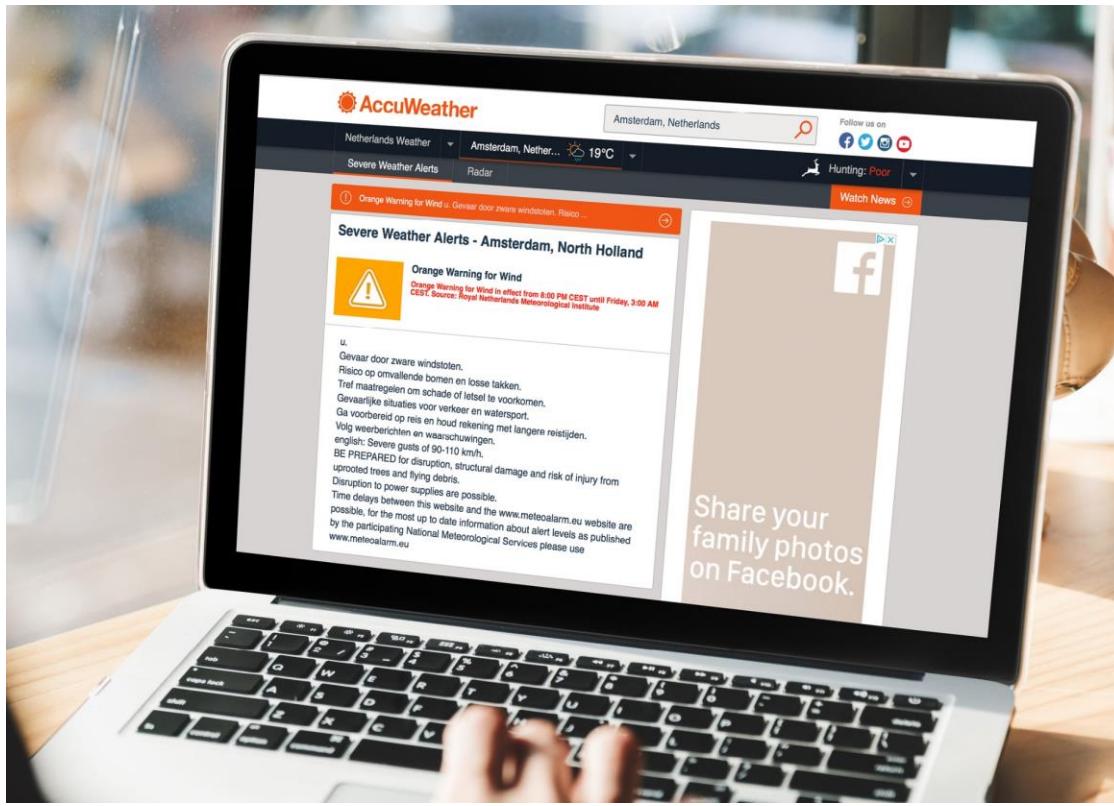
Agencia Estatal de Meteorología



DMI
Vejr, klima og hav

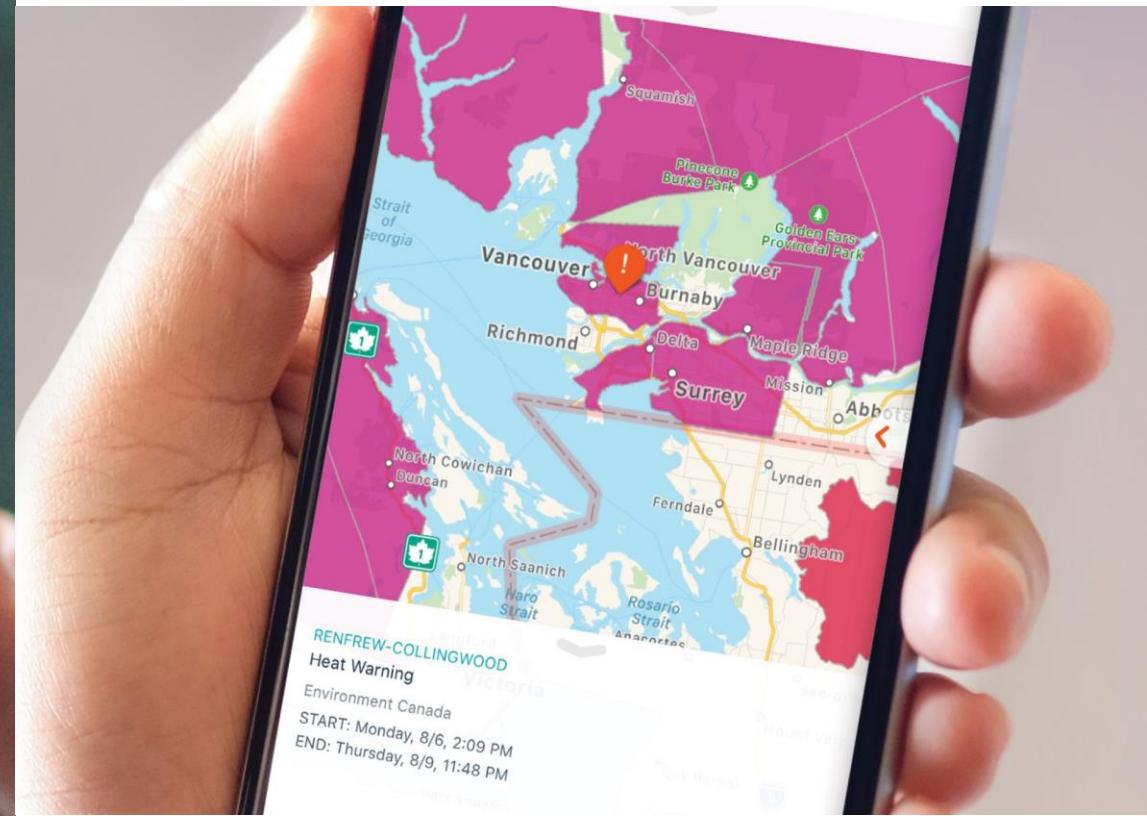
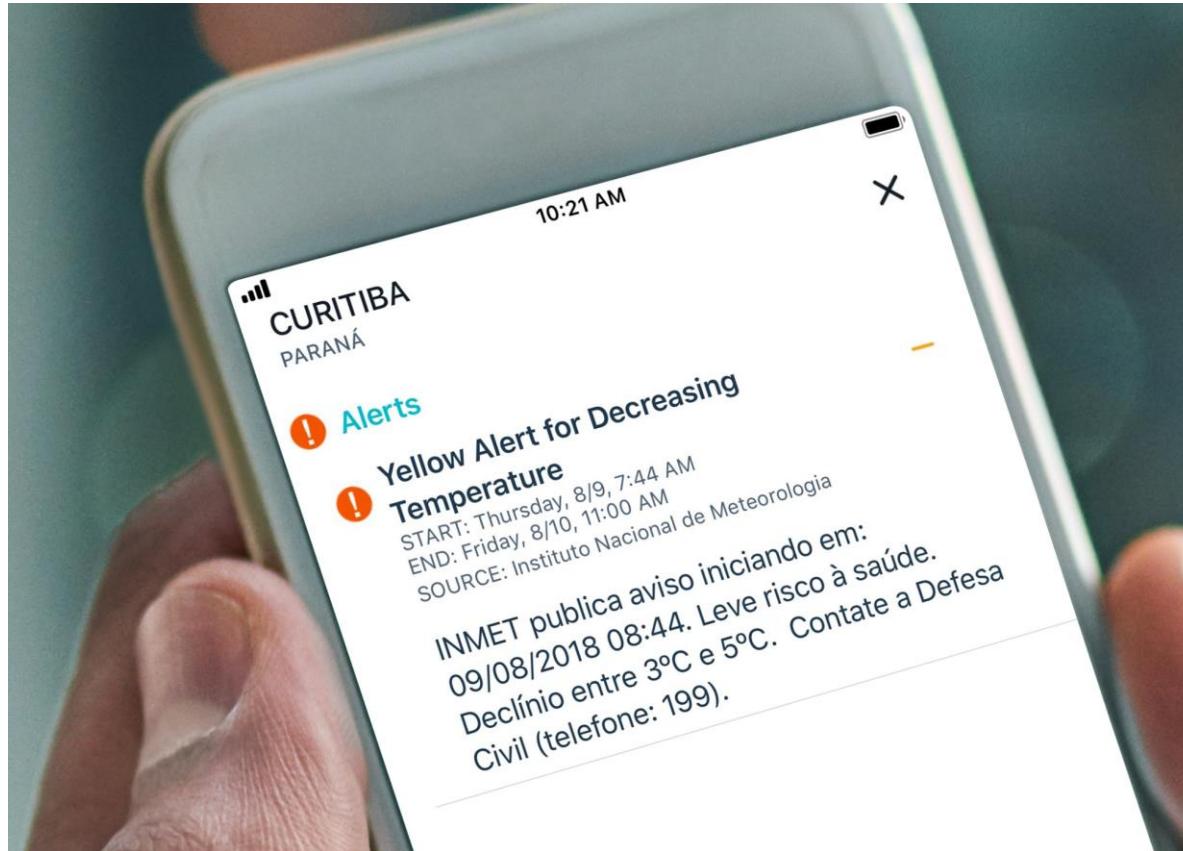


Weather Alerts on AccuWeather Properties





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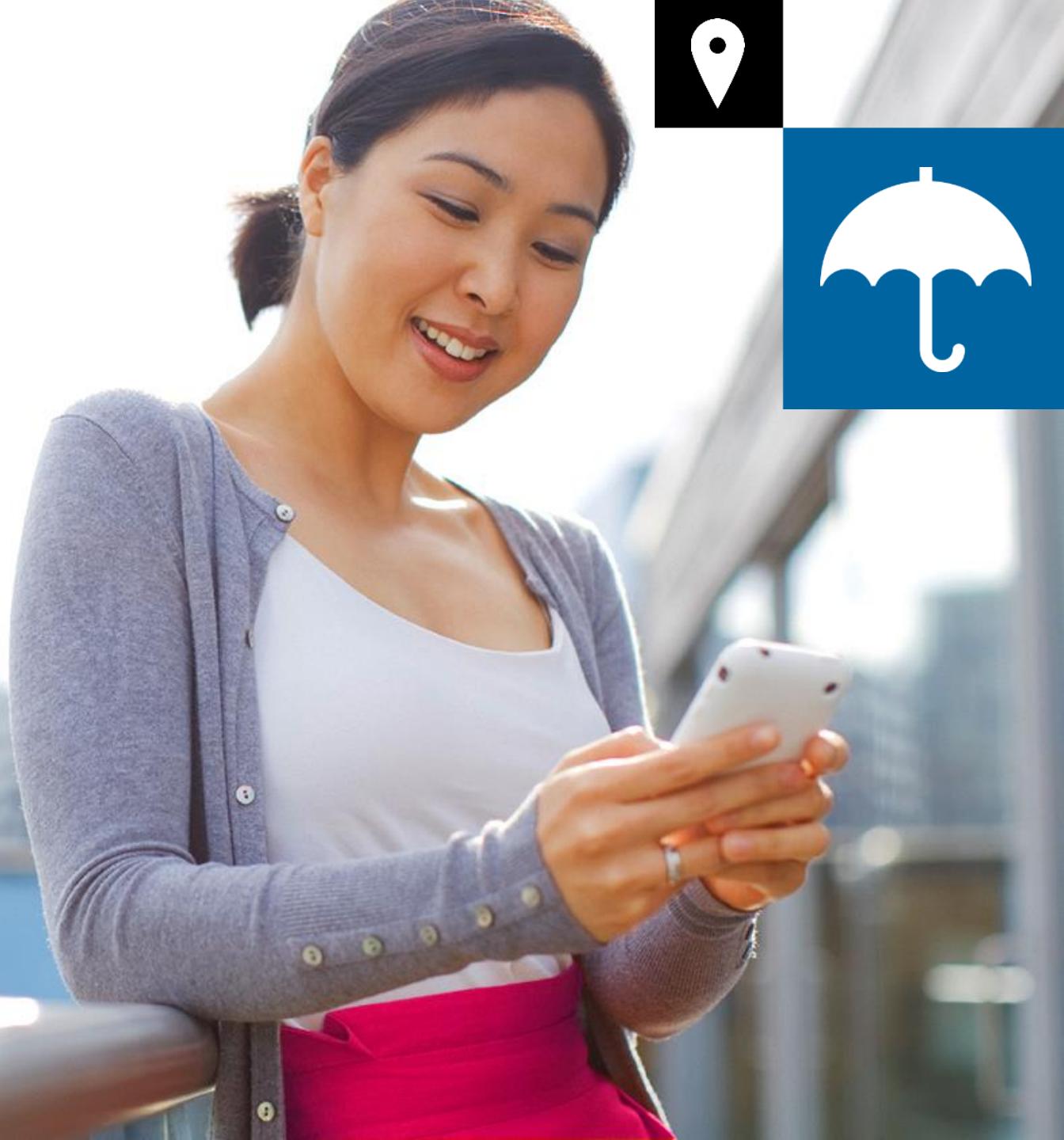


Partnerships are Vital for Success...

- Working in partnership, AccuWeather CAN and WILL help governments reach citizens in new ways
 - Increasingly important as public sector budgets shrink
- AccuWeather is committed to delivering warnings accurately, quickly, and reliably to users.
- Additionally, we provide through our partnership:
 - Technical expertise related to data formats, input on warning system design
 - Quality control feedback in real-time to identify dissemination challenges



Best Practices for Digital Distribution of Weather Alerts





Best Practices

- In AccuWeather's experience working with NMHSs from around the world, we have found warnings formatted in Common Alerting Protocol (CAP) to be the most robust and suitable for digital distribution and consumption.
- CAP allows a warning message to be consistently disseminated simultaneously over many warning systems to many applications.
- This allows for wide dissemination and consumption by users.



Key Components to Effective Weather Warning Data Systems

- **What** is the weather hazard?
- **Where** is the hazard occurring?
- **When** will the hazard occur?
- **Why** does the user need to be aware of the hazard and how should they react?
- **How** will the user get additional/updated information on the hazard?



Key Components – What is the Weather Hazard?

- **CAP Elements:** `<event> or <eventcode>, <description>, <language>`
- Ensures end users are aware of the weather hazard type – snow, ice, coastal flooding, heat warning, thunderstorm, etc.
- A clearly defined list of weather warning names and types as well as a brief description of the hazard type as a reference to CAP message recipients is important (in each language supported)
- Color scheme (Yellow, Orange, Red, etc.) and display preferences, such as standard icons and priorities.
- Ability to expand the list as warning system changes



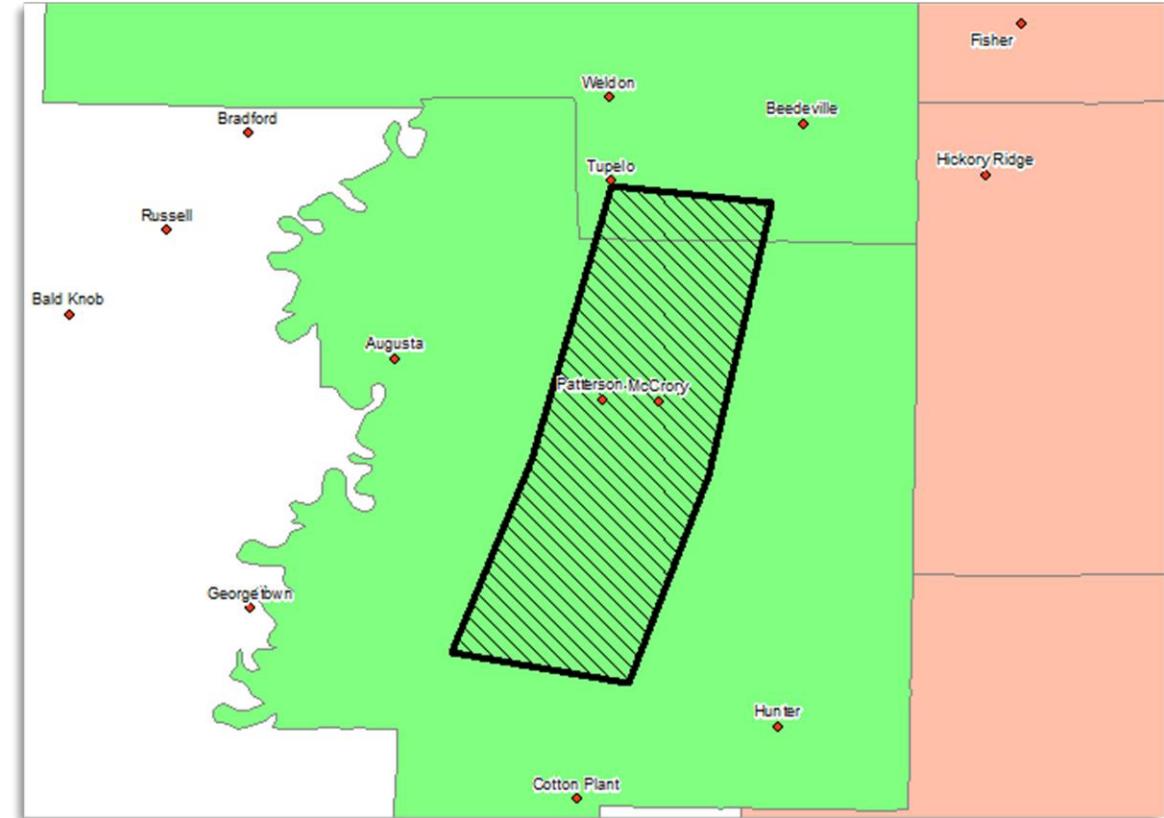
Key Components – Where is the Weather Hazard?

- **CAP elements:** `<areaDesc>`, `<polygon>`, `<geocode>`
- Critical to ensure only the correct users receive the weather warning to prevent “warning fatigue”
- How are the warning risk areas being defined geographically?
 - Simple: Follow Existing Administrative Boundaries (provinces, states, counties, etc.)
 - Moderate: Dynamic Warning Areas (polygon areas)
 - Advanced: Custom Defined Warning Boundaries (following terrain etc)



Key Components – Where is the Weather Hazard?

- Dual approach works well in other countries – both the inclusion of standardized administrative boundaries and polygon areas.
- Use administrative areas (counties) to increase awareness.
- Use dynamic warning area to refine impact area.
- Impacted Areas: Patterson and McCroy





Key Components – When is the Threat for the Weather Hazard?

- **CAP elements: <onset>, <expires>**
- We strongly recommend including a defined start and end time for the warning
 - Situations that are “in effect until further notice” present challenges & do not communicate full and complete information to users
- Update relevant times during warning lifecycle
 - Time Extensions
 - Cancellations



Key Components – Why Does the User Need to be Aware of the Hazard?

- **CAP Elements:** *<description>, <instruction>*
- Very helpful to user when making proactive and informed decisions.
- Contains actionable text to describe the weather hazard, *expected impacts*, and what actions the end user should take to remain safe
- Must be succinct (a few sentences), but convey important details in easy to understand language – not a “meteorological forecast discussion”
- Multiple languages are valuable, when tagged correctly
- Routinely update with latest information during warning lifecycle to stay relevant



Key Components – How is Event Tracked Over Time?

- **CAP Elements:** `<identifier>`, `<references>`, `<msgType>`, `<responseType>`
- Unique Identifier for the message is a CAP requirement (alert identifier)
- Using references section to link to previous message will insure the correct hazard is updated.
- `<event code>` section can be used to store an unique key that will remain the same throughout the lifecycle of an event.
- Message type also helps with relating a new message to a previous one.
- New response type status, all clear, helps with partial expires



Other Important Aspects

- Clearly identify test messages and how they should be handled
 - Set the status = test
- Frequent communication and discussion empowers success in these types of partnerships
 - Ongoing discussion about what is working great and opportunities to enhance format or workflow.
 - Clearly communicate upcoming changes in timely manner.
 - Work with partners to validate changes prior to deployment to production systems.

Thank You!

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