



EM Briefings: Content Matters

Communicate Message

Or...

How to effectively communicate
complex information in a few minutes

Andy Devanas WFO KEY
Jennifer McNatt SR ROC

Objectives

- Define Briefing
- Pre-season(storm) coordination
- Basic briefing structure
- Briefing content
- Briefing performance

Briefing Blueprint

Briefing Structure

- Start and finish with important points

Briefing Content

- Focus on the what, and not the why

Briefing Clarity (performance)

- Speak customer's language

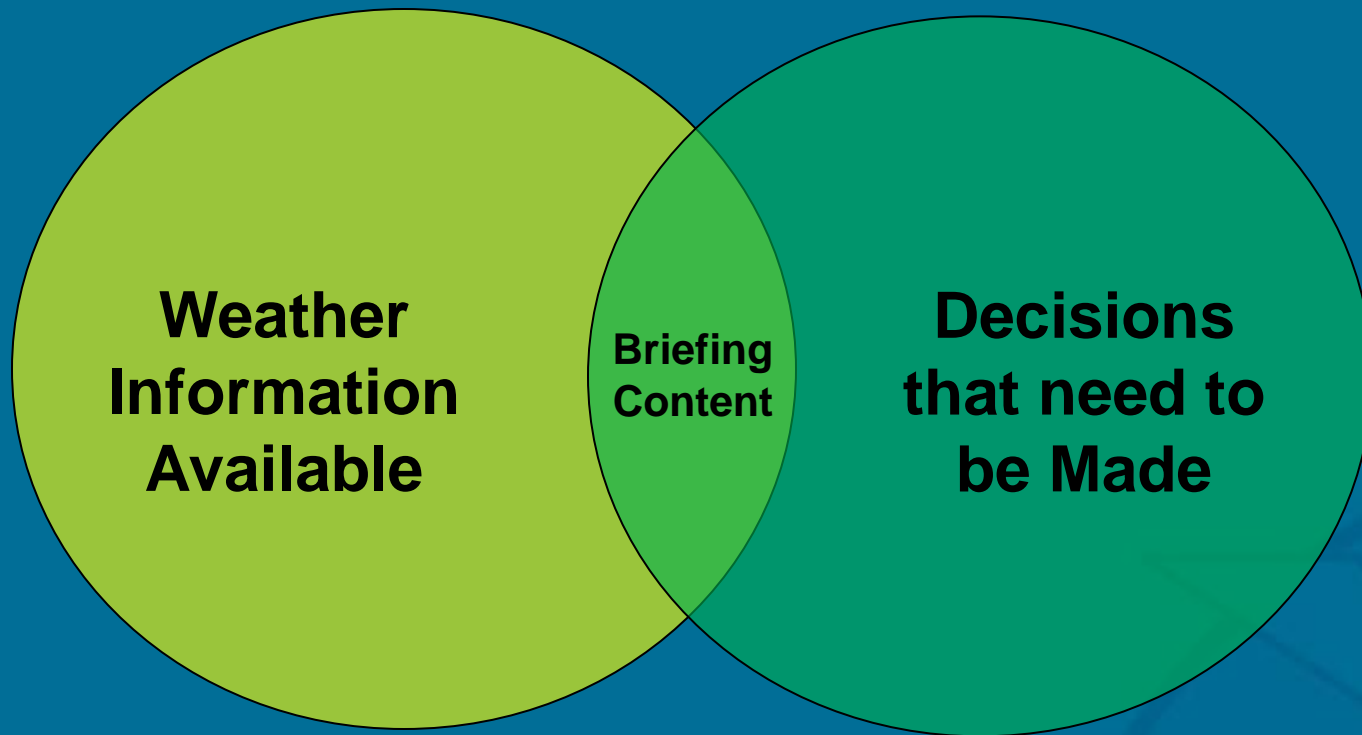
WHAT IS A BRIEFING?



WHAT IS A BRIEFING?

- Type of meeting or presentation where *information basically flows in one direction*
- General purpose is to give information or instructions to someone (individual or group)
- Not a debate, discussion, or show, not an exchange of ideas

So Much Weather Information, So
Little Time During a Briefing...
So what do we talk about?



Briefing Length

Perception Gap

Survey Question: How long should a meteorology briefing take?

Meteorologists: 10-15 mins

Decision Makers: 2-3 mins

Basic Briefing Training for Incident Support (on LMS)

Cammye Sims

BRIEFING PREPAREDNESS...



Know your customer...

What are customer needs, and how do they differ?

Emergency manager

- Increased level of spatial and temporal detail

- Increased level of uncertainty communicated

Media (Radio vs. Television vs. Newspaper)

- Less spatial and temporal detail

- More protective action discussion/recommendation (general)

- Less uncertainty communicated

- Likely your briefing (interview) will be edited before release

Briefing Examples for Discussion

Emergency Managers

Storm 48 hours away

Do

- Storm location
- Storm size and intensity
- Storm motion
- Express confidence
- Forecast model performance (uncertainty)
- Anticipated watches and warnings
- Expected arrival
- Expected impacts
- Storm Duration
- Reasonable worst case scenario
- Reasonable speculation

Don't

- Latitude and Longitude
- Fluctuations in intensity
- Storm history
- Watches and Warnings outside of area of interest
- A forecast model performance
- Historical analogs
- Specific impacts (rainfall,surge)
- Don't regurgitate information in the NHC package

Briefing Examples for Discussion Media

Storm 48 hours away

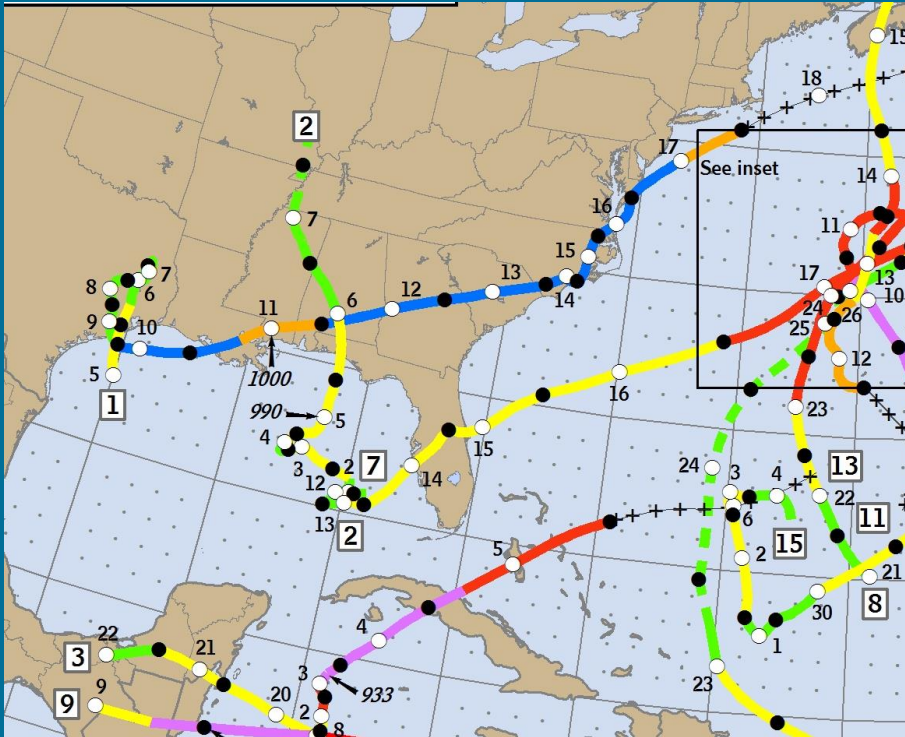
Do

- Storm location
- Storm size and intensity
- Storm motion
- Forecast model performance (uncertainty)
- Anticipated watches and warnings (only in general terms)
- Expected arrival (general)
- Expected impacts (general)
- Storm Duration (general)
- General preparedness and protective actions statements

Don't

- Latitude and Longitude
- Fluctuations in intensity
- Storm history
- A forecast model performance
- Historical analogs
- Specific impacts (flooding)
- Deviate from official
- **NEVER mention worst case**
- **NEVER speculate**
- **NEVER – NEVER speak “off the record”.**

Why not Analogs?



Allison – June 2001
Barry - August 2001

Both near 9-10" of rainfall

BRIEFING STRUCTURE...



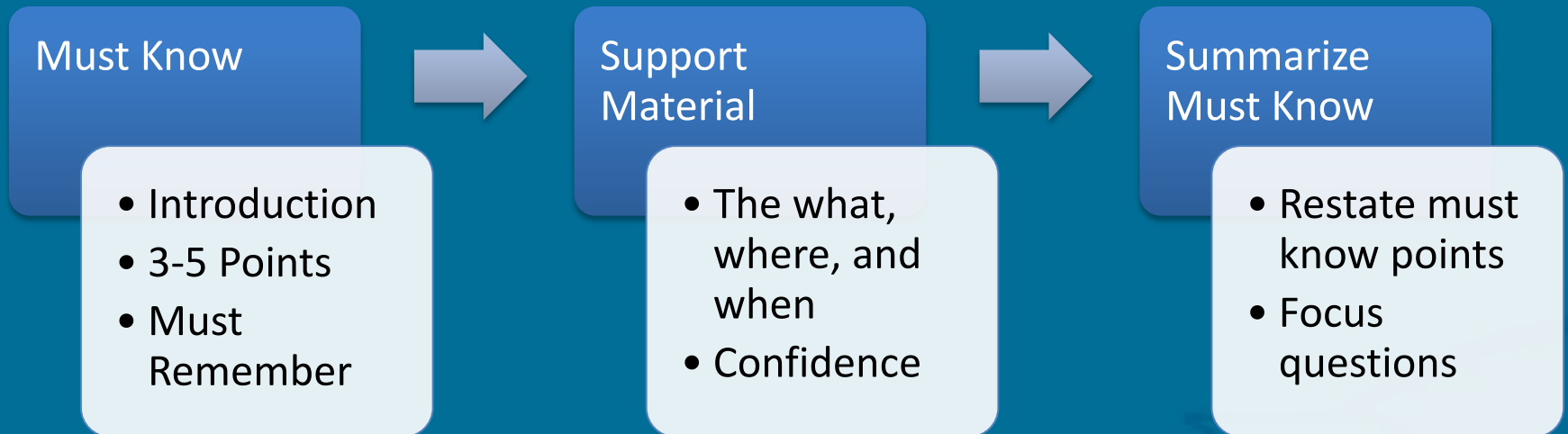
Briefing Structure

All briefings should be designed to answer these questions:

- What is it...
- When is it going to get here...
- What is it going to do...
- When is it going to be over...
- What is your confidence this will occur...

With all due respect to Larry Gispert

Briefing Structure



Always begin and end with what you want remembered



BRIEFING CONTENT...

Briefing Content

things to consider

Language (text, words)

Graphs, Plots, Maps

Symbols

Colors

Graphics (photos, schematics, etc)

Signal to noise ratio

Complexity vs. Simplicity

Detail vs. Brevity





BAMs Feb 2015

SOMEWHERE OVER THE RAINBOW

How to Make Effective Use of Colors in Meteorological Visualizations

By Reto Stauffer, Georg J. Mayr, Markus
Dabernig, and Achim Zeileis

RGB vs HCL
(hue-chroma-luminance)

Briefing Content

- You will have more information than you can, or should, brief.
- Prioritize information.
- State what they need to know, no more.
- Focus on the what, not the why.
- Tailored for targeted customer base.
 - Water managers vs. EM/civil defense

Briefing Content

- Careful with worst case scenario (reasonable).
- Respect operational significance.
- Respect operational cycles.
- If everything's a threat, nothing's a threat.
- Limit text.
- Use implicit terms of uncertainty, not explicit.

...Worst Case...

**THERE IS POTENTIAL FOR 4 TO 8 FEET OF SURGE
ACROSS WESTERN...**

**IN A WORST CASE SCENARIO...WATER LEVELS
OF 10 TO 11 FT ABOVE MSL ARE POSSIBLE.**

Charts, Graphs, and Maps

Explain what it is

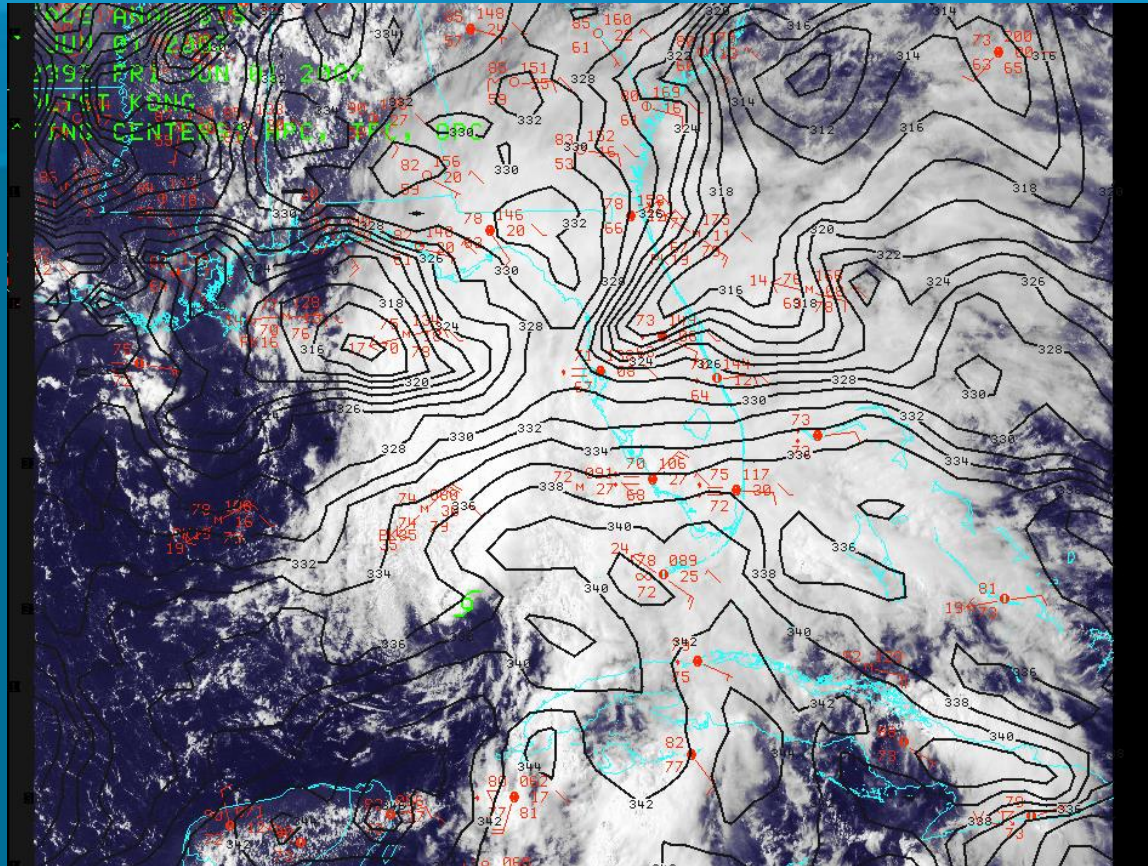
Ordinate, abscissa, plot, symbols

Briefly describe region

Point out a frame of reference

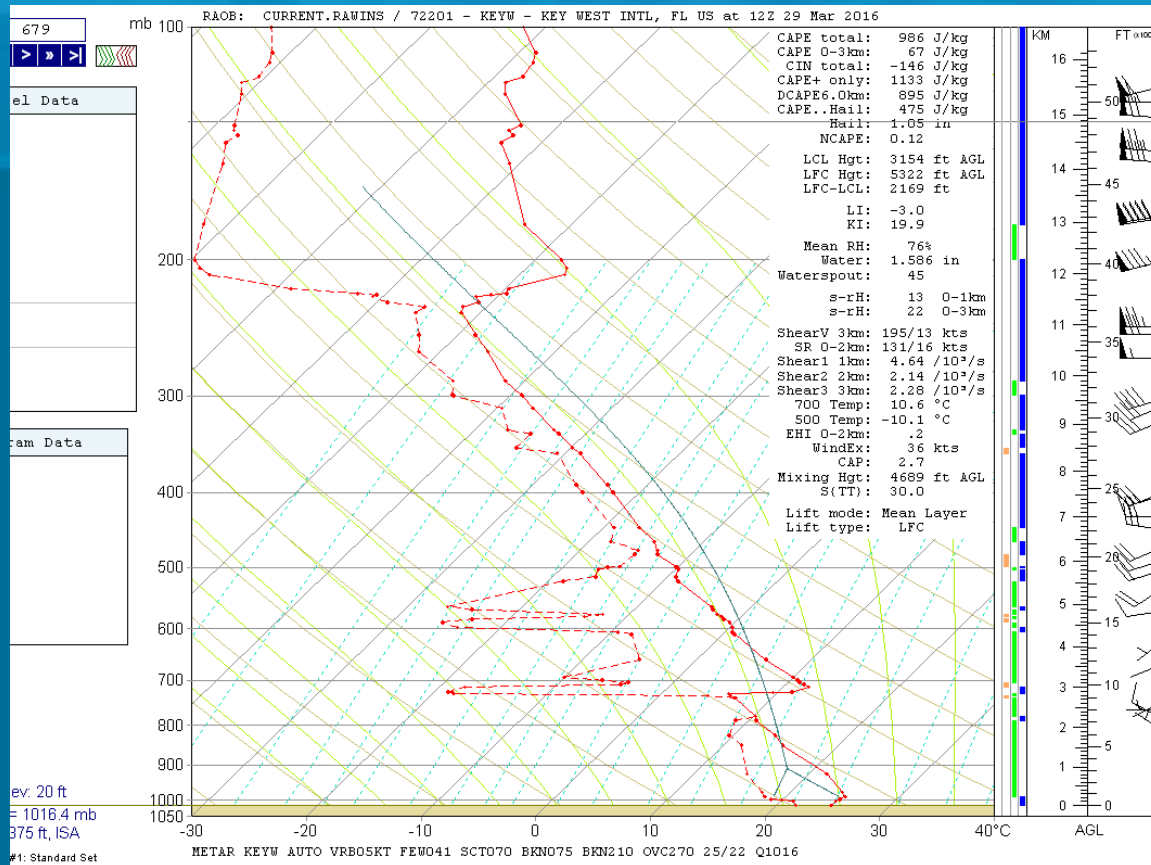
Reduce Noise

If not discussed, don't include



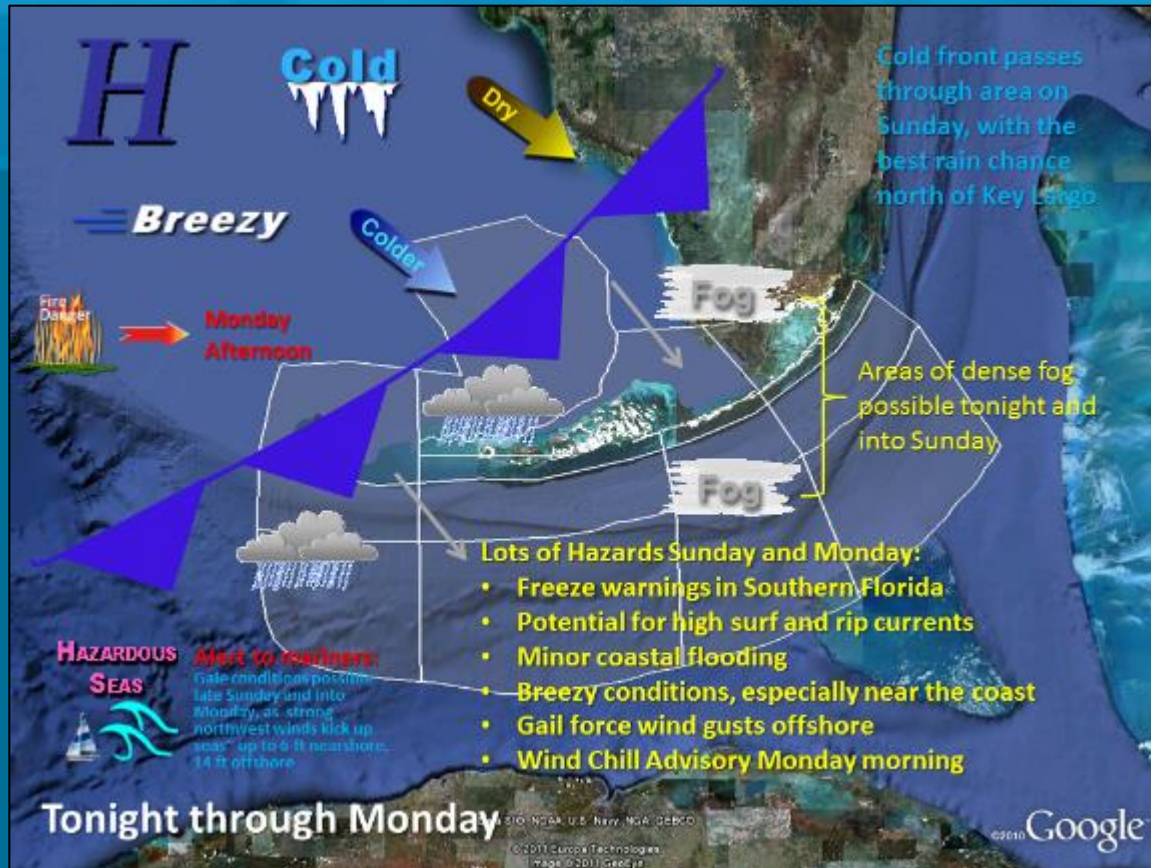
Where's Waldo?

Point out reference points, explain what is on graphic...



COOL PLOT – BUT NEVER USE

Too Complex...too noisy...focus on why...better ways to convey information

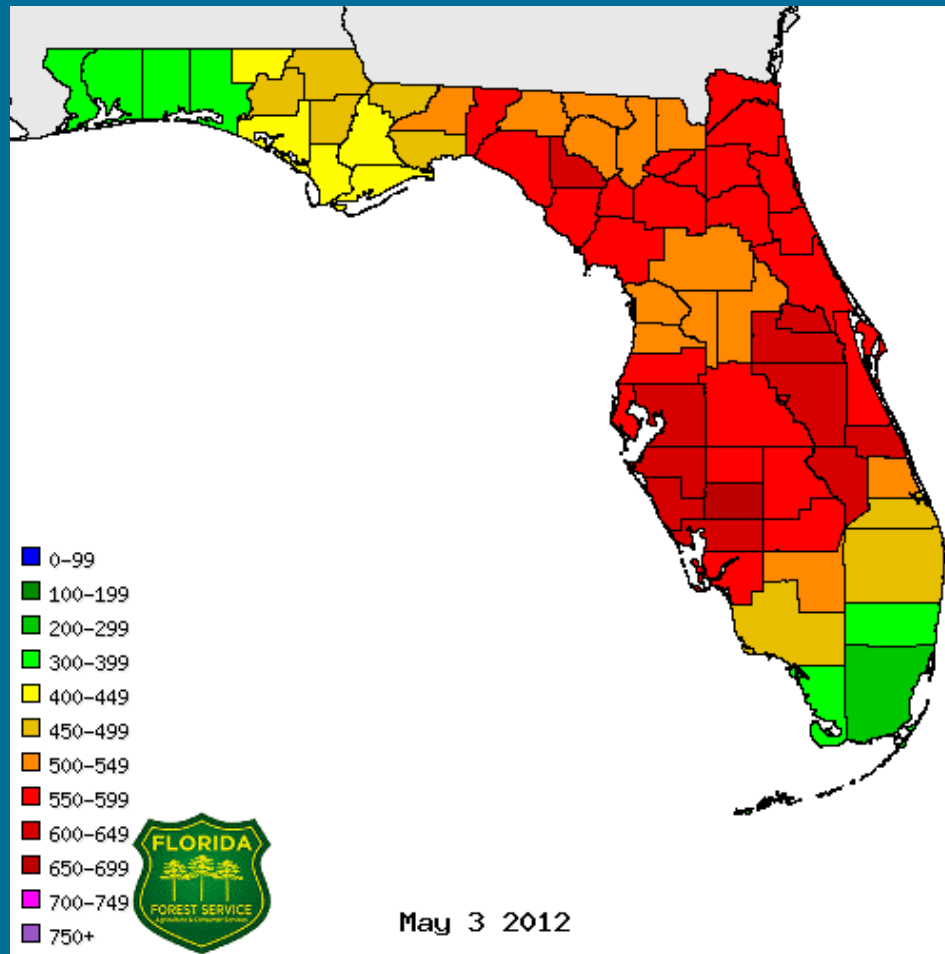


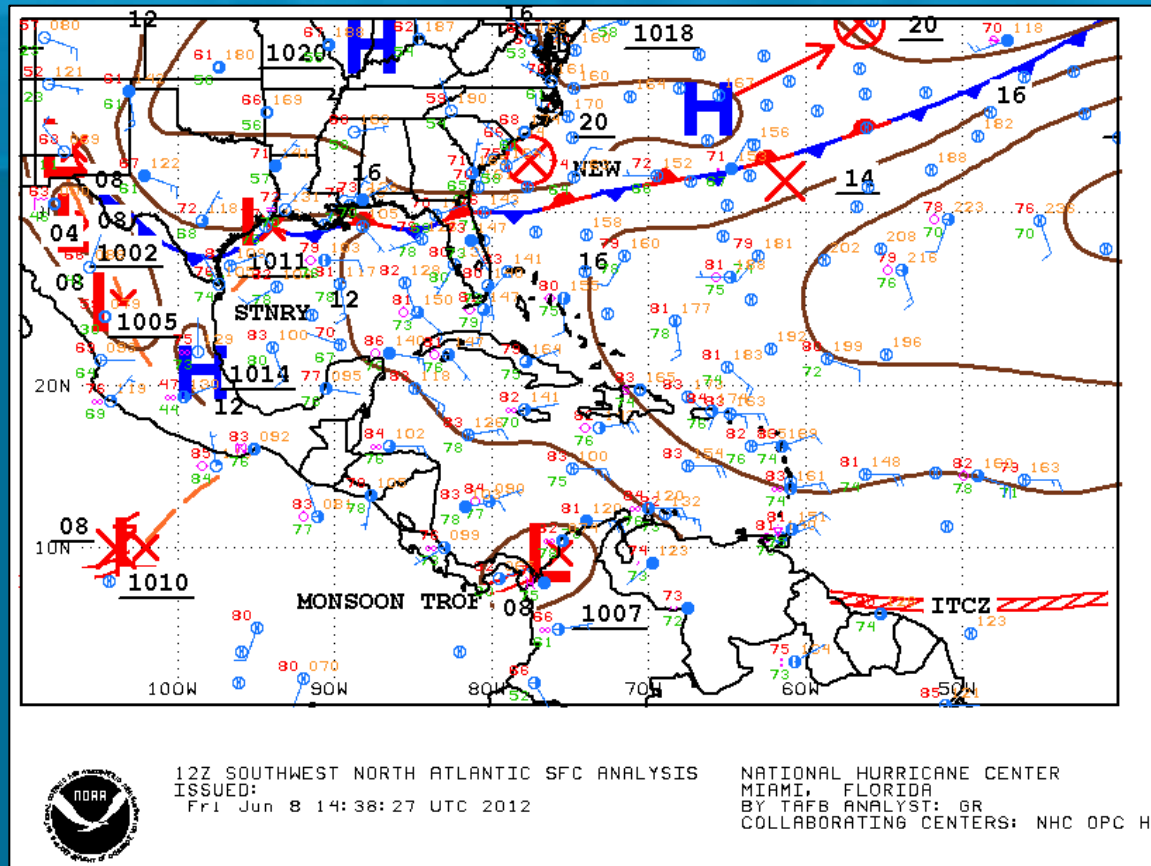
Use of Arrows

Meteorologists use arrows to show motion

Everyone else in the free world uses arrows to point at things

Red Is Bad (keep it simple works)

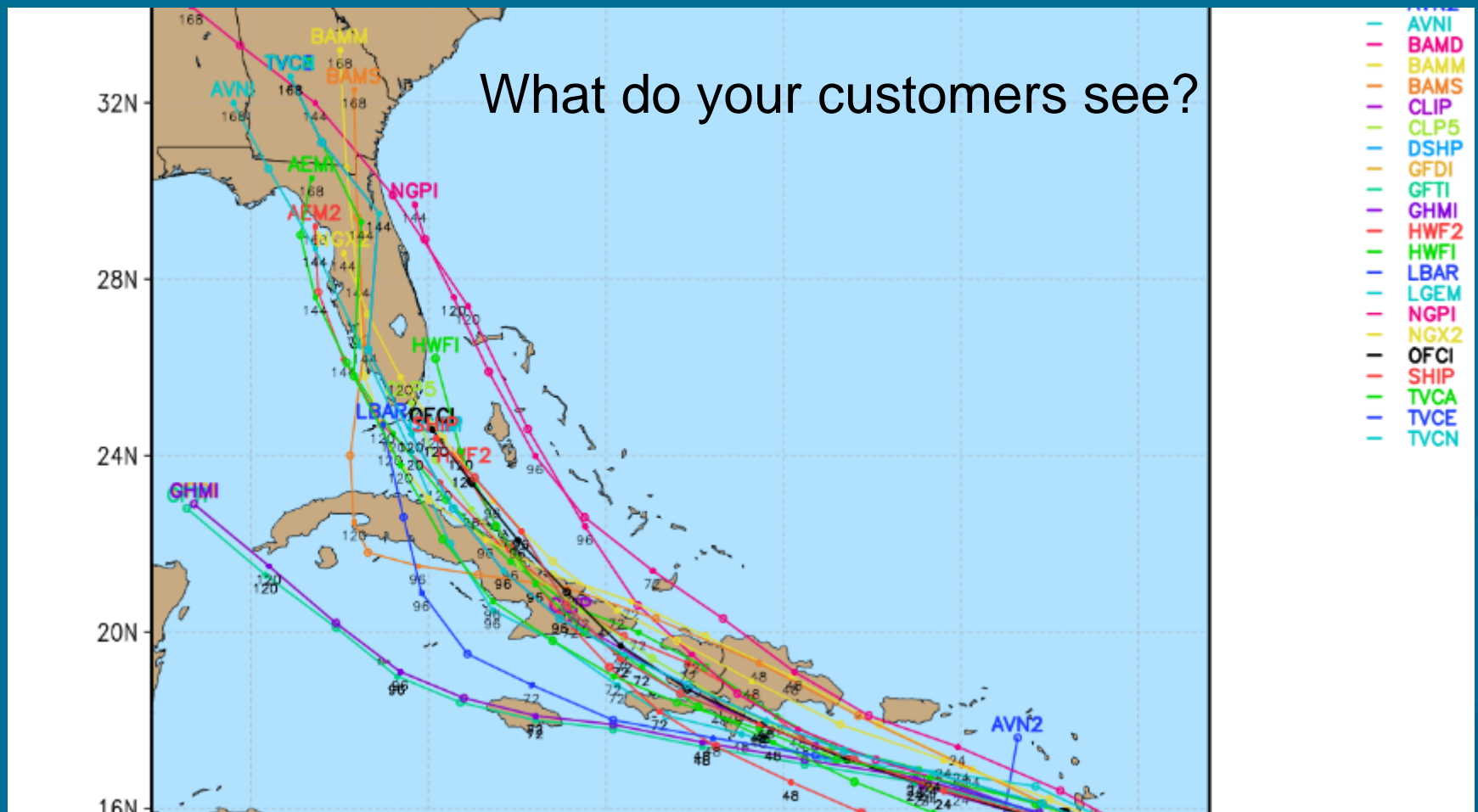




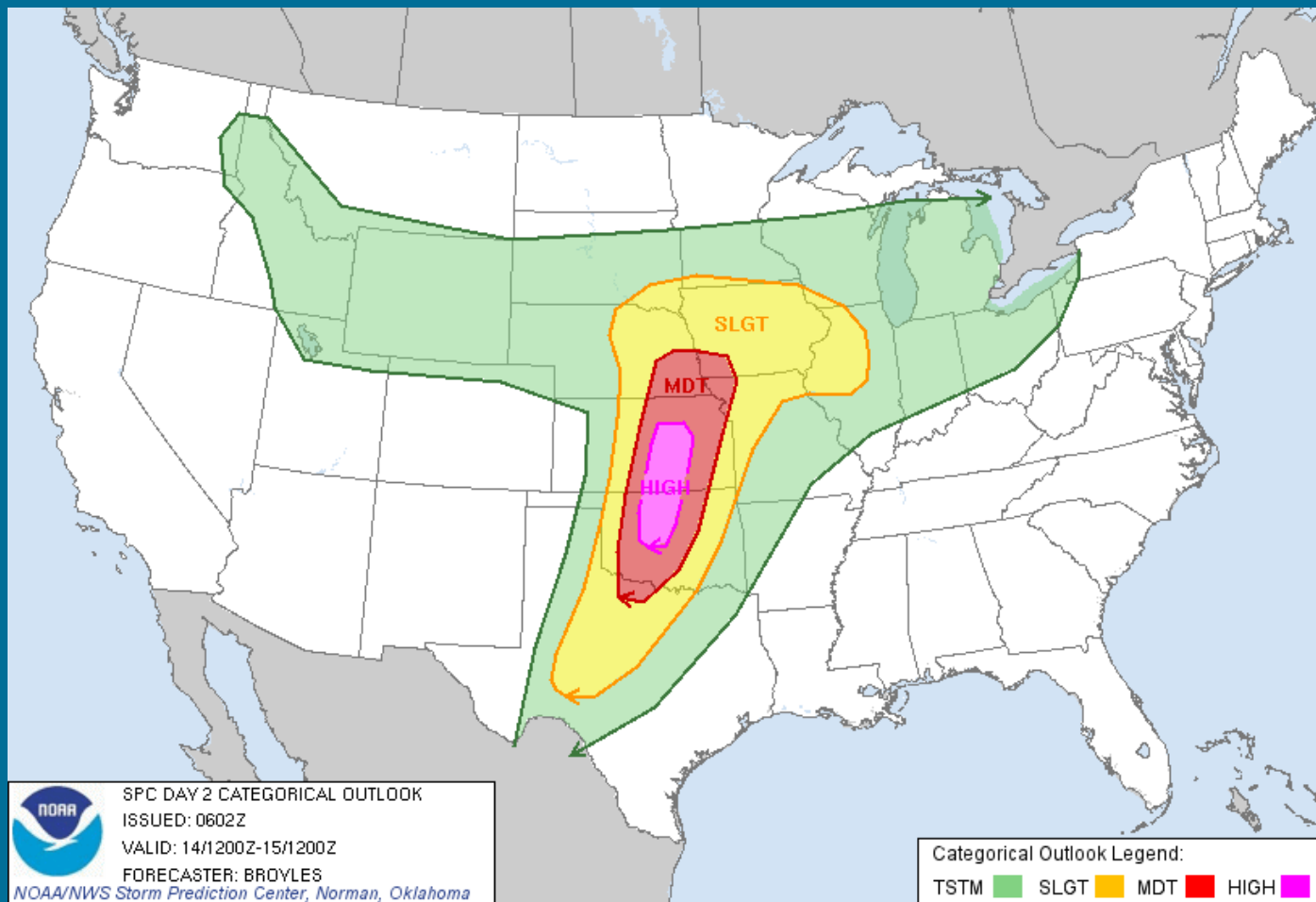
Meteorological Symbols

Only use with other meteorologists

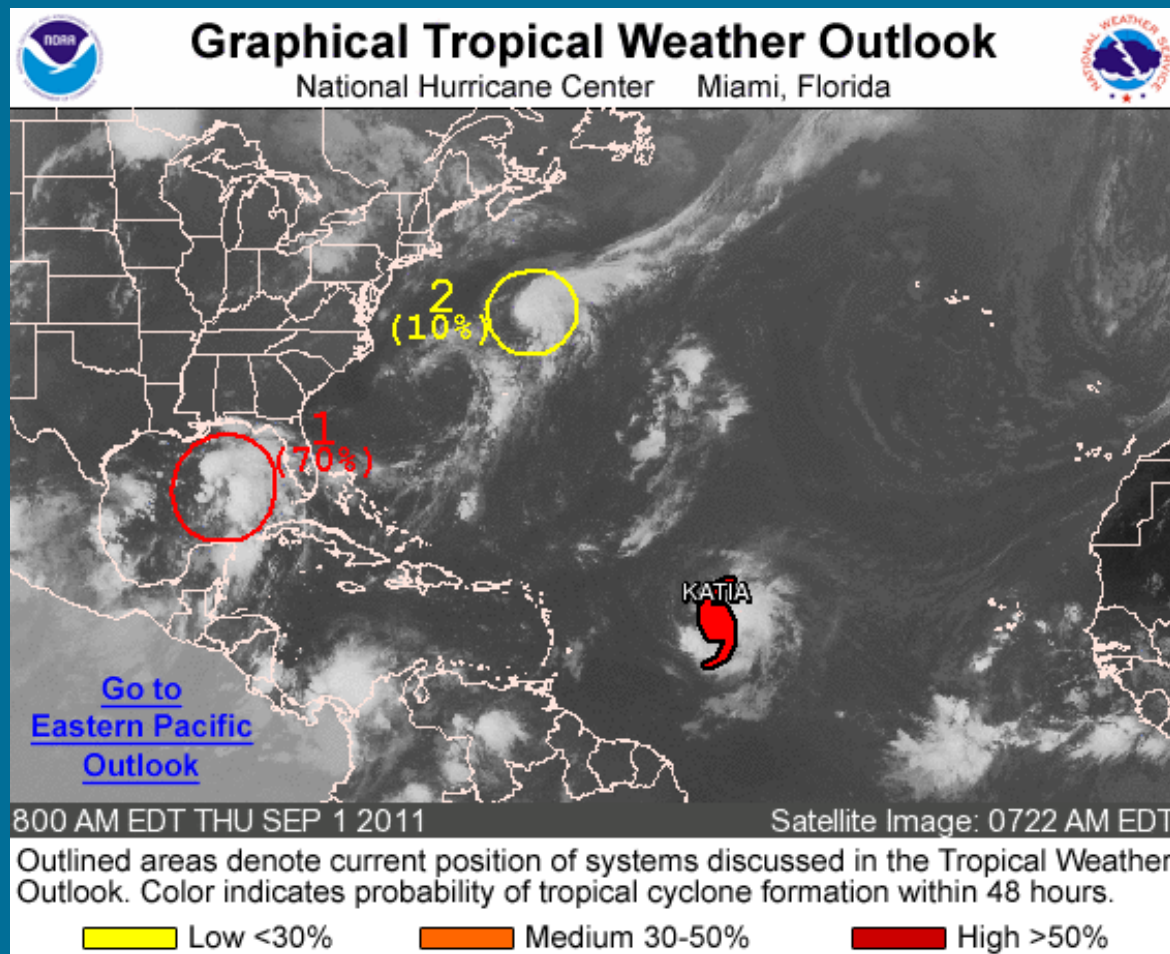
Graphics Content



The What, Not the Why!



Graphical Tropical Weather Outlook



BRIEFING PERFORMANCE...



Briefing Clarity

- Do not bury the lead
- Be nice and concise
- Sell what you have to say
- Be confident, calm, and assertive
- Speak like the audience is taking notes
- Anticipate questions and responses
- If you don't have anything to say, don't say it

Words Matter

Speak their language, not ours

- Words we don't say...
 - Vorticity, Helicity, Buoyancy, MEOW...
- Words we shouldn't say, but do...
 - Dewpoint, Trough, Ridge, Low, High...
- Words we should never say, but do...
 - Eyewall replacement, well developed center

Always be professional...

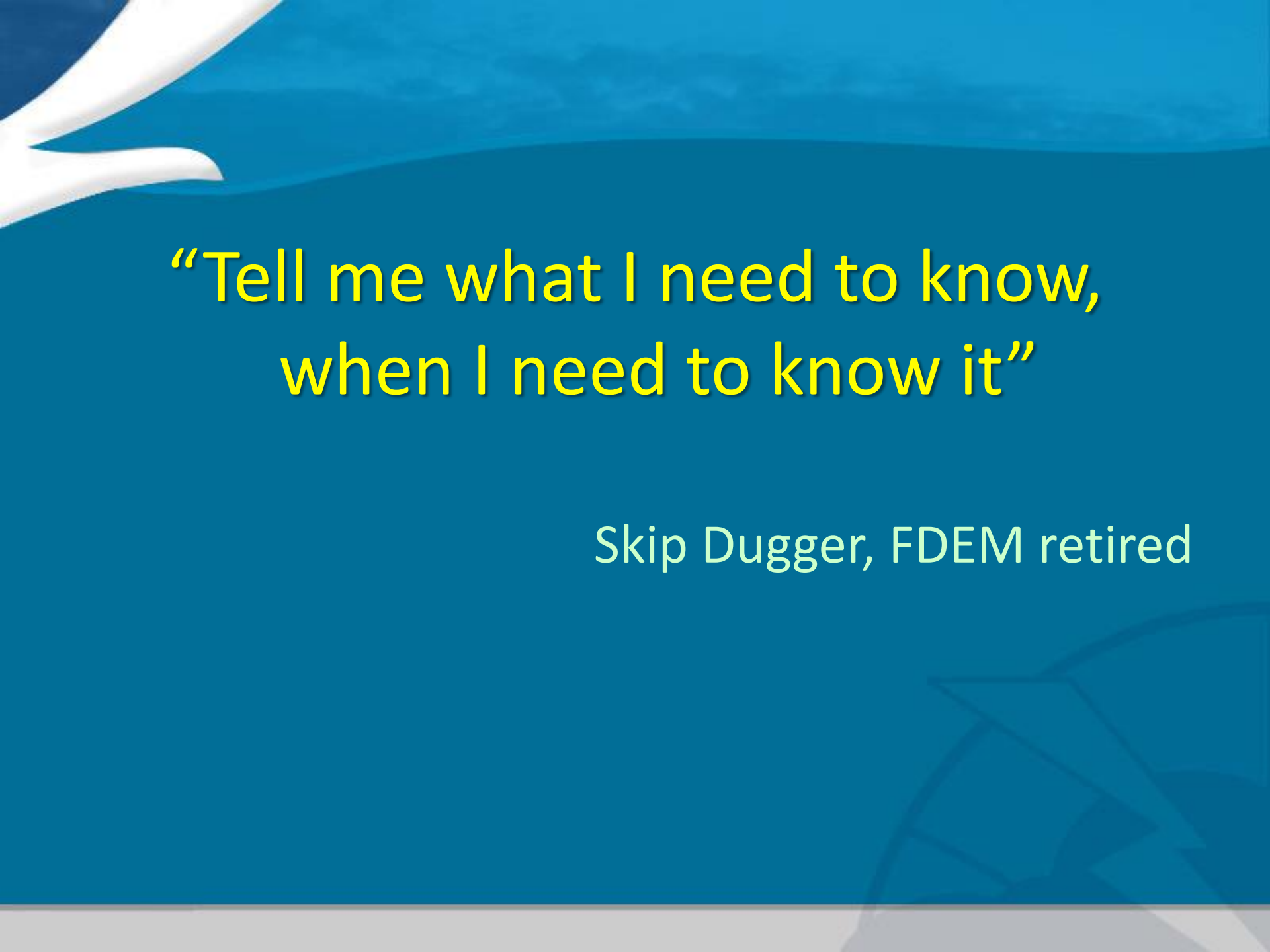
- Don't be folksy, funny, critical, condescending, or sarcastic... (especially with media)
 - None of these things translate well
 - Could lead to misunderstanding
 - Could distract from message
 - Be polite and try to stay on message
- Be Patient...
 - Your customer does not know what you know – and can become frustrated easily.
 - If the customer does not understand it is your challenge to explain in a manner the customer will understand.

Things to Remember

- You are the expert. You are the authority.
 - The customer depends on what you say – and will take action.
- Prepare for your briefing.
 - Have bullet points or outline ready.
 - Do not use prepared text for a briefing. It will sound like you are reading.
 - Consider a one page executive summary you can handout/email
- Don't forget the four essentials (what, where, when, conf)
- Again - be brief (thus the name).
 - Remember, they are likely receiving many briefings
 - The briefing will drive others actions.
- ***This is not about you*** – you are but one piece of information

Things to Remember

- Become experts in coordinated information
 - Network and coordinate with customers
 - Find their needs and concerns – brief accordingly
 - Understand and speak their language
- Stay within your expertise and authority
 - You are there to support decision, not make it
 - You are not Emergency Management Experts
 - You are not Social Science Experts
 - You are not Media Experts



“Tell me what I need to know,
when I need to know it”

Skip Dugger, FDEM retired

BUT...



“Don’t tell me what you don’t know or unsure of. Tell me what you DO know and we’ll start from there.”

**Gene Kranz
Flight Director
Apollo 13**

Weather Briefings

“Still a great deal of uncertainty...”

“Highly uncertain forecast”

“Not a lot of confidence in exact track of storm...”

“Overall confidence in the forecast is low...”

“It is hard to say at this time...”

Uncertainty

- **Uncertainty is a part of meteorology**
 - But shouldn't dominate the message
- **Can be expressed in several ways:**
 - Verbal expressions
 - Not very precise
 - Confidence range
 - Or range of values; spread increases as uncertainty increases
 - Probability forecasts
 - Interpretation much easier; allows user to set thresholds

Benefits to communicating uncertainty

- Assist people in making more effective decisions
- Helps manage user expectations
- Promotes user confidence
- Reflects the state of the science

Synonyms of “Uncertainty”

- Distrust
- Mistrust
- Vagueness
- Hesitation
- Indecision
- Unpredictability
- Ambivalence
- Confusion

Synonyms of “Certainty”


- Confidence
- Trust
- Belief
- Faith
- Sureness
- Validity

WMO Suggested Terminology

Terminology	Likelihood of the occurrence/outcome
Extremely Likely	> 99%
Very Likely	90 – 99%
Likely	70 – 89%
Probable – more likely than not	55 – 69%
Equally likely as not	45 – 54%
Possible – less likely than not	30 – 44%
Unlikely	10 – 29%
Very unlikely	1 – 9%
Extremely unlikely	< 1%

How do you build trust?

- Not by outlining why you could be wrong
- But by giving a range of possibilities
 - Here is our best estimate / what we do know
 - Here is what you should be planning for-- plausible worst case/alternate scenarios



"The NWS forecast is just that - a forecast. And we need to be prepared to respond to incidents based on the best available information. The most important aspect of this event is that people responded and lives were saved."

- Craig Fugate

Takeaway Points

- Briefings are to communicate information
- Briefings should be brief
- Keep within briefing structure
- Keep content simple to understand (graphics)
- Prioritize information
 - Be mindful of operational significance
 - Be mindful of planning cycles
- Be nice and concise