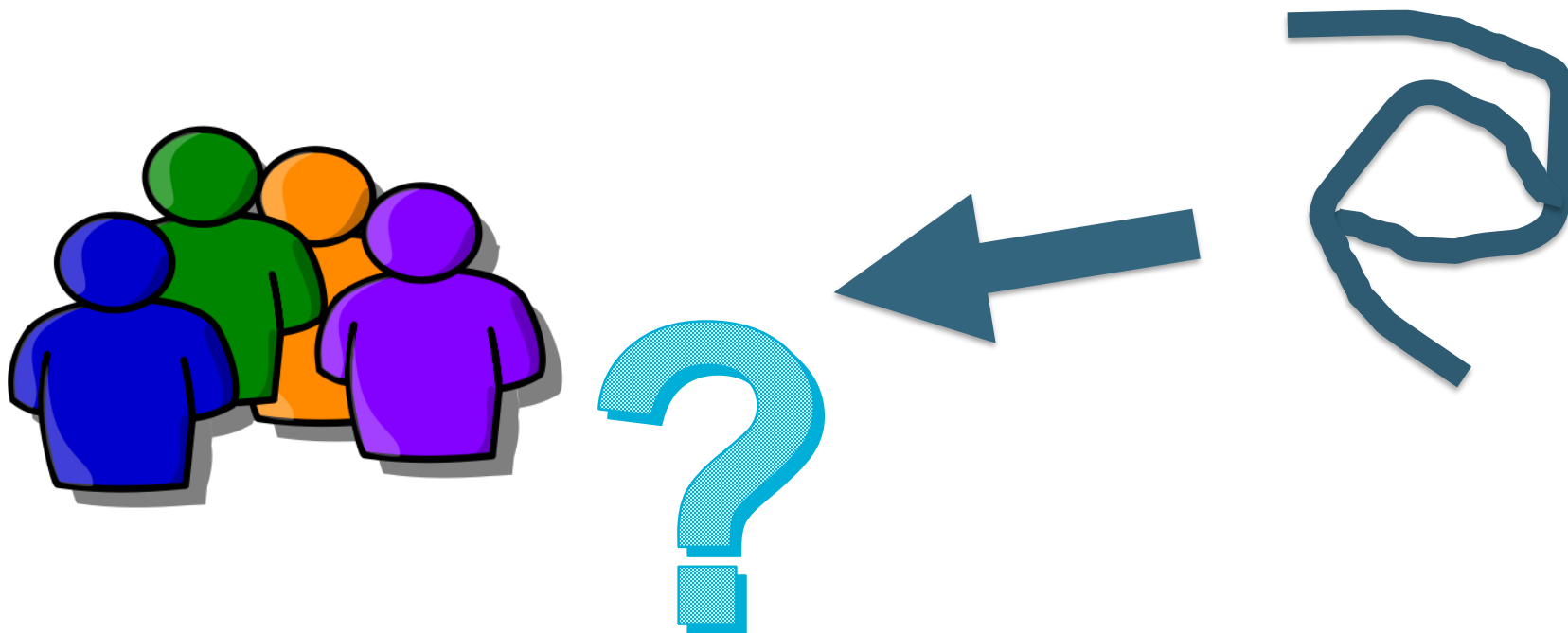


TC messaging and social media

1. Who are the people relying on the forecast to make decisions?



Acknowledgements: Robbie Berg, NHC, NOAA

http://severe.worldweather.wmo.int/TCFW/RAIV_Workshop2019/33_Local-Threat-Assessment_PabloSantos.pdf

TC messaging and social media

What decisions are they making?

TC messaging and social media

What information do they require?

TC messaging and social media

How do they get the information?

TC messaging and social media

What can we do to help them make better decisions?



Risk:
the potential of losing (or gaining) something of value

Risk = Probability/Likelihood X Consequence X Vulnerability

Risk perception: subjective judgement people make about probability, consequences or vulnerability which may vary from person to person

Actual Risk \neq Perceived Risk

Risk tolerance: how willing people are to "take their chances"



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Risk Tolerance

Risk Tolerance: Spectrum of Plausible Outcomes (TC Wind)

(in event context; for a given community)

Added loss of lives/property ← increasing regret potential → Added loss of time/resources





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User case studies of risk tolerance – lead time

Risk Tolerance: Spectrum of Plausible Outcomes (TC Wind)

(in event context; for a given community)

Added loss of lives/property ← increasing regret potential → Added loss of time/resources

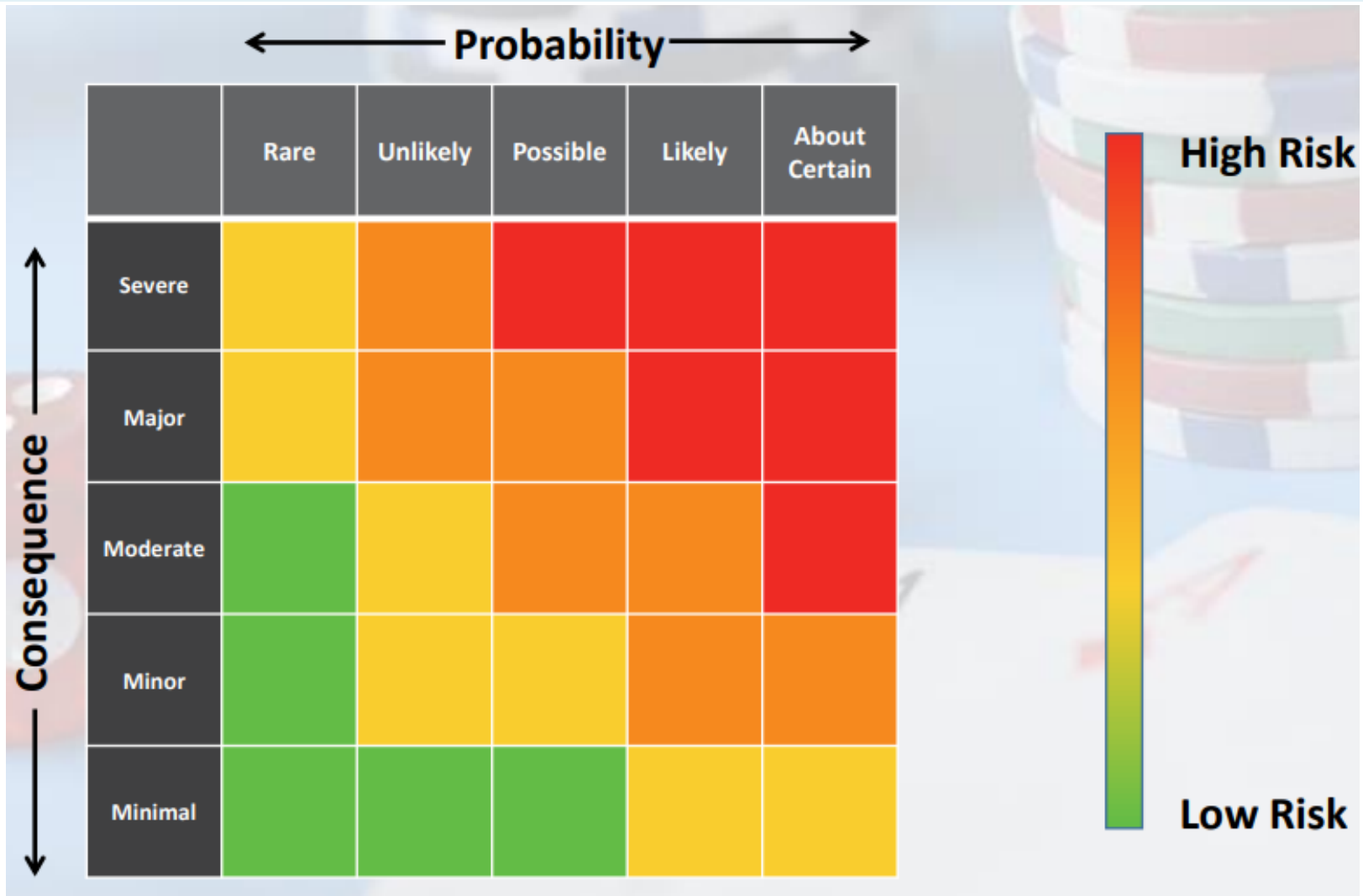




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Low Probability - High consequence Events

If you were told you had a one in 1000 chance the plane you were about to board would crash would you get on it?





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Risk Tolerance





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Risk Tolerance

Which choice would you make?

A. Receive \$100 guaranteed

B. Flip a coin, “heads” you win \$200, “tails” you win nothing

Which choice would you make?

A. Flip a coin, “heads” you lose \$200, “tails” you lose nothing

B. Lose \$100 guaranteed



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Communicating uncertainty: what words to use?

and weather

“Medicine is a science of uncertainty and an art of probability.”



-- Sir William Osler (1849-1919)



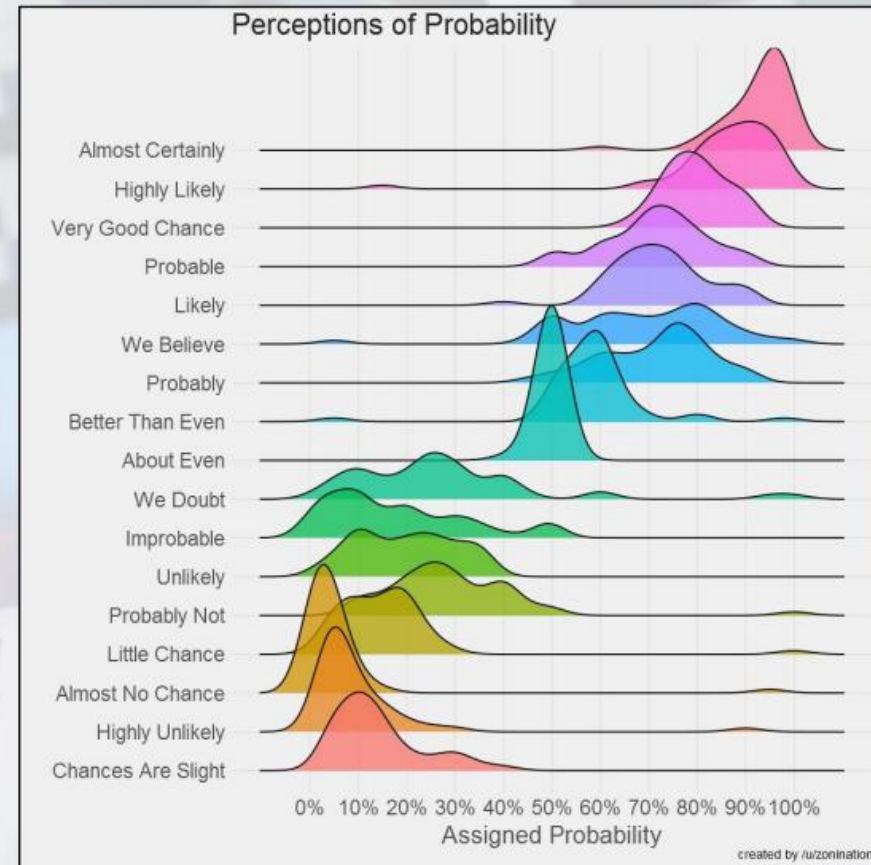
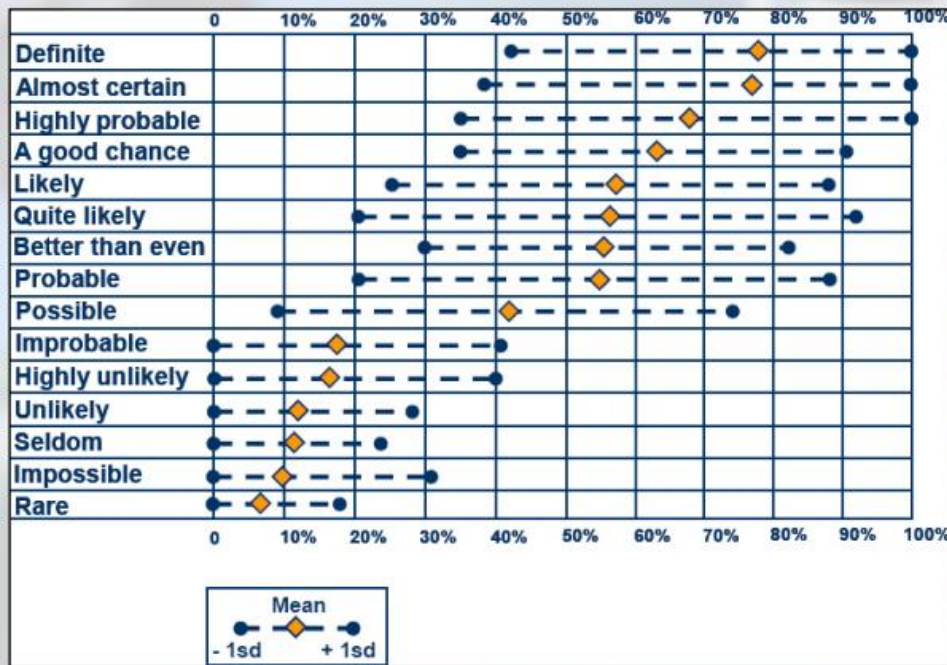


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Communicating uncertainty: what words to use?

Hillson (2004)



Using Wind probabilities for decision making

Scenario references: most likely

Worst case ('reasonable' worst case)

When will gales start? Most likely or earliest possible?



Summary

People want certainty but we can't give it to them!

We don't make decisions for people. Stick to the weather!

Everyone has different risk tolerance and risk perception.

Be as clear as possible in describing risk?

Social media

1. Who uses facebook, twitter, Instagram ...?

Challenges and opportunities

Too much focus on intensity – Focus on the hazard

e.g. don't use 'downgraded' if a weakening cyclone is likely to bring heavy rain

Too much focus on timing and location of landfall – focus on the region to be affected and when the impact will occur

Too much focus on the exact track – TC is not a point so impact is felt away from centre plus uncertainty of track

Use previous cyclones for comparisons but be careful in language as every TC is different:

While it is not expected to be as strong as Winston, it may bring just as much rainfall

Acknowledgements: NHC, NOAA

http://severe.worldweather.wmo.int/TCFW/RAIV_Workshop2019/25_Social-Media_EricBlake.pdf

Social media

Challenges and opportunities

At long lead times will have to be general citing uncertainty 'heads up' notice

Increase clarity as lead time decreases

Use Key points

Use graphics

Link to official products and trusted sources (emergency management) and general preparedness tips

Can dispel rumours (politely!)

Videos work! Facebook live

Acknowledgements: NHC, NOAA

http://severe.worldweather.wmo.int/TCFW/RAIV_Workshop2019/25_Social-Media_EricBlake.pdf



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Social media: examples

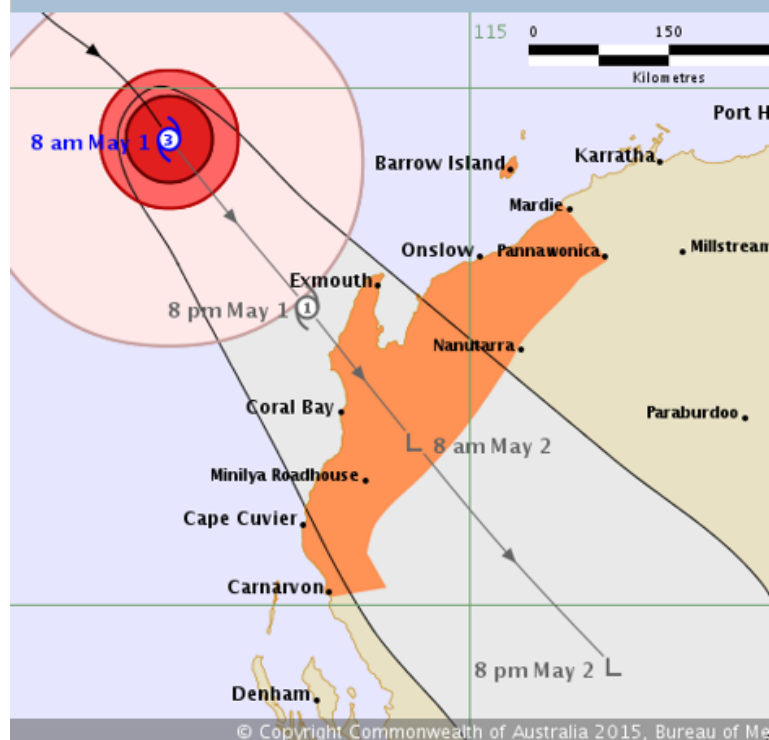


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Key Messages for Cyclone Quang

9 am Thursday, 1 May 2015



- Category 3 Cyclone Quang is rapidly weakening
- Expected to cross coast as a Cat 1 cyclone NW coast near Exmouth overnight
- Gales with gusts to 100 km/h expected between Onslow and Coral Bay from late this morning
- Risk of Cat 2 winds at NW Cape/Exmouth if Quang weakens slower before landfall
- Heavy rain for western Pilbara and Gascoyne
- Storm tide risk between Onslow and Coral Bay tonight
- Last cyclone to cross coast in May was Herbie in 1988

www.bom.gov.au/cyclone/ #CycloneQuang @BOM_WA



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Social media: examples

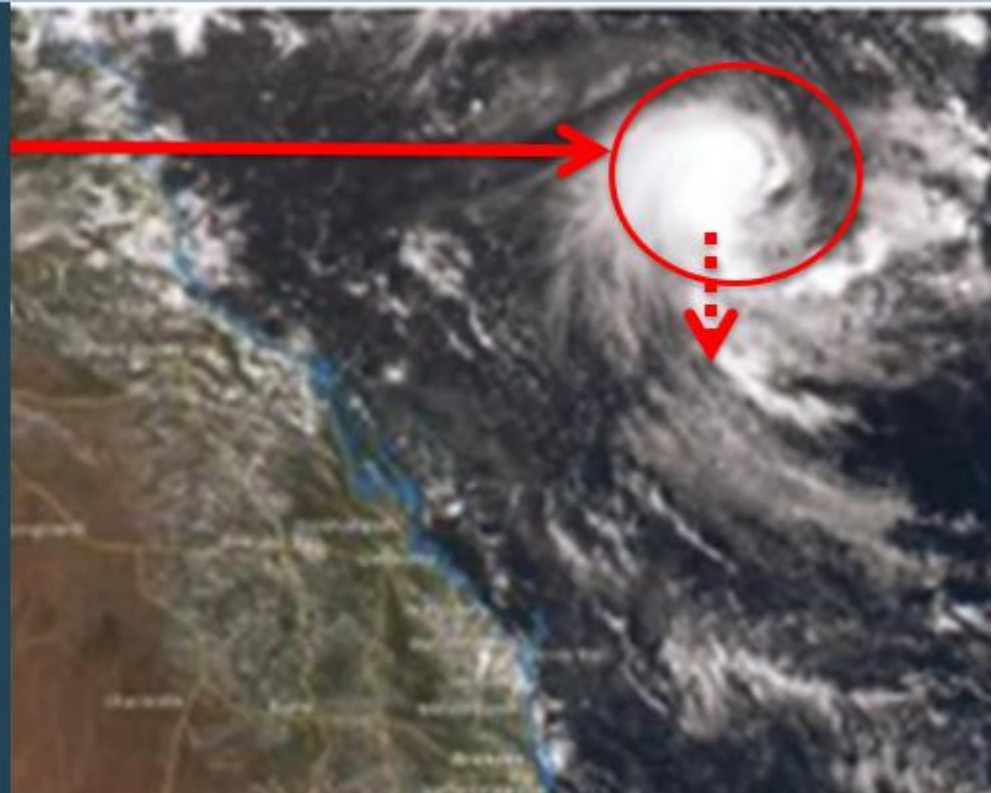


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Key Messages on Coral Sea tropical low 10 am Thursday, 1 January 2017

- Tropical low expected to be a cyclone during Friday
- Moving slowly south and will remain well off the coast for next three days and not directly affect the coast.
- But may approach the Qld coast, most likely between Townsville and Rockhampton early next week.
- Heavy swell may begin to affect Qld coast later on the weekend.





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Social media: examples



Key Messages on Hurricane Joaquin Thursday Morning, October 1, 2015



1. Preparations to protect life and property in the central Bahamas should be complete. The slow motion of Joaquin during the next 24 to 36 hours will bring a prolonged period of hurricane force winds, storm surge, and very heavy rainfall to those islands.

2. Confidence in the details of the forecast after 72 hours remains low, as there have been some large changes in the model guidance overnight. The range of possible outcomes is still large, and the possibility of a hurricane landfall in the Carolinas still cannot be ruled out.

3. Efforts continue to provide the forecast models with as much data as possible. The NOAA G-IV jet flew the first in a series of missions in the storm environment last night, and these missions will continue today. The National Weather Service also continues to launch extra balloon soundings.

4. Because landfall, if it occurs, is still more than three days away, it's too early to talk about specific wind, rain, or surge impacts from Joaquin in the United States. Regardless of Joaquin's track, strong onshore winds will create minor to moderate coastal flooding along the coasts of the mid-Atlantic and northeastern states through the weekend.

5. A hurricane watch for a portion of the U.S. coast could be required as early as tonight.

6. Many portions of the eastern U.S. are currently experiencing heavy rains and gusty winds associated with a frontal system. These heavy rains are likely to continue for the next few days, even if the center of Joaquin stays offshore. The resulting inland flood potential could complicate preparations for Joaquin should it head toward the coast, and even more substantial inland flooding is possible if Joaquin later passes near or over these same areas.





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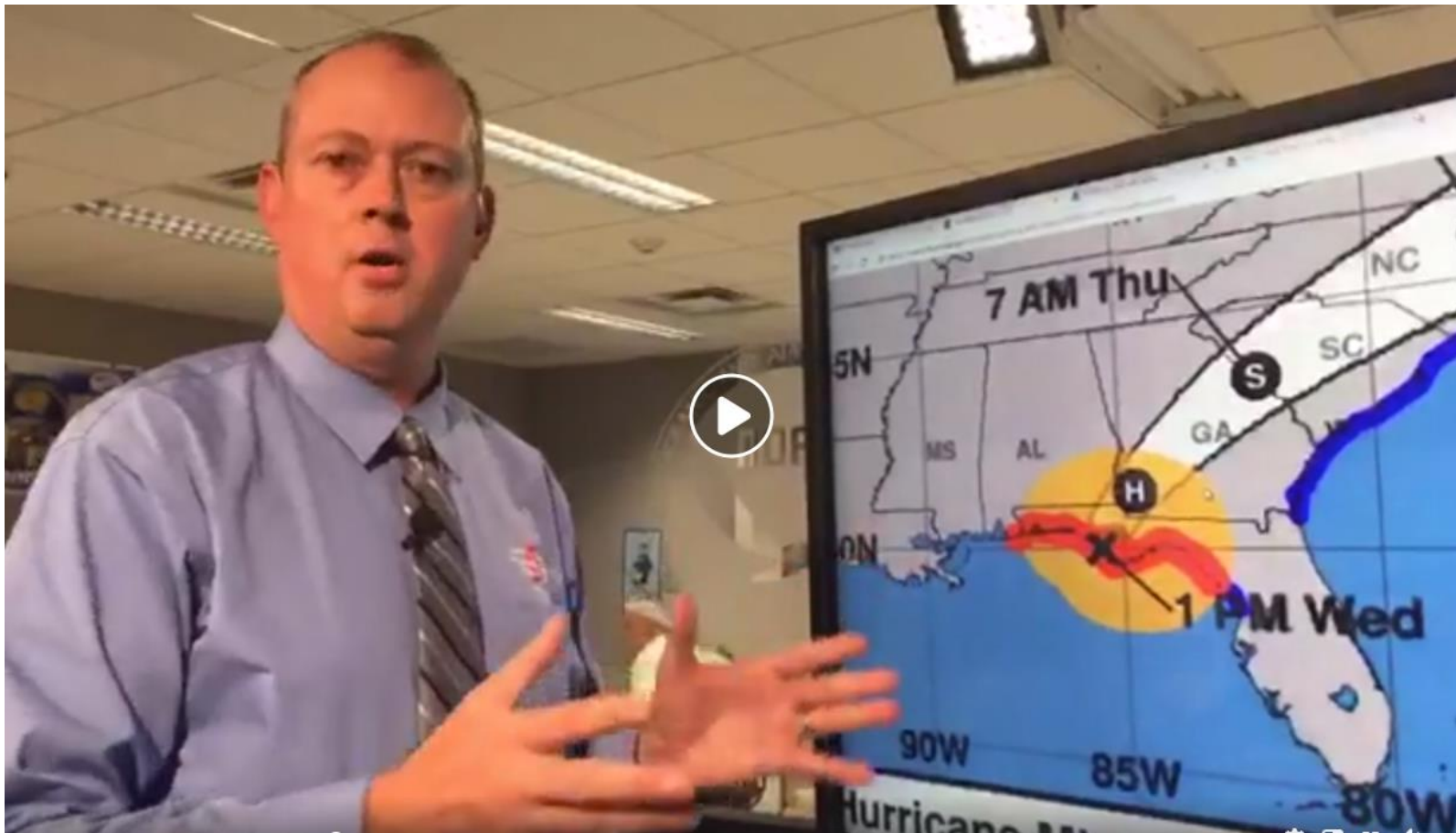
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Social media: video examples

<https://www.nhc.noaa.gov/twitter.php>

NHC Facebook live:

<https://www.facebook.com/NWSNHC/videos/2203187556620597/>





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Exercises:

Discuss how you use social media,
stories that you would like to share,
what ideas you might share,...

Review each other's facebook/twitter pages, NHC page