Recent Decision Support Services and Discussion

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NWS Baltimore/Washington DC

Agenda

- **Weather Ready Nation – Pilot Project**
- **Pyramid of Decision Support Services**
- **Discussion**

Extreme Weather Events

- **Impacts felt by everyone not just decision makers.**
- **Billions of dollars in costs every year.**
- **High demand for accurate weather information.**
- **NWS New Direction: Not just forecasts but Impacts from forecasts and a communication of uncertainties.**

NWS Baltimore/Washington DC Pilot Project

IDSS in an Urban Environment

4 Main Pilot Project Goals

1. Improve the flow of information

2. Better explain a range of possibilities

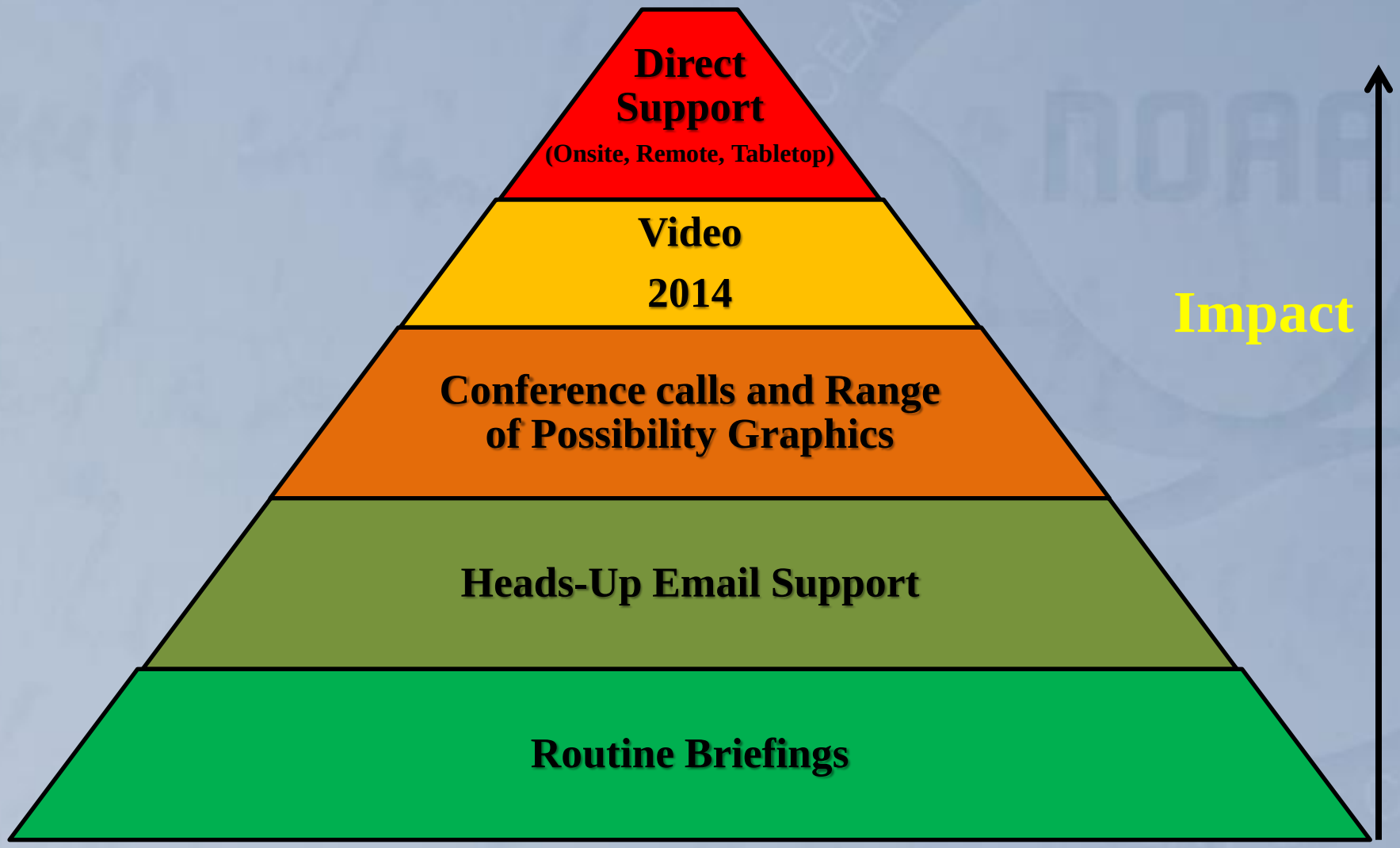
3. Develop a societal impacts catalog

4. Build a Weather Ready Nation

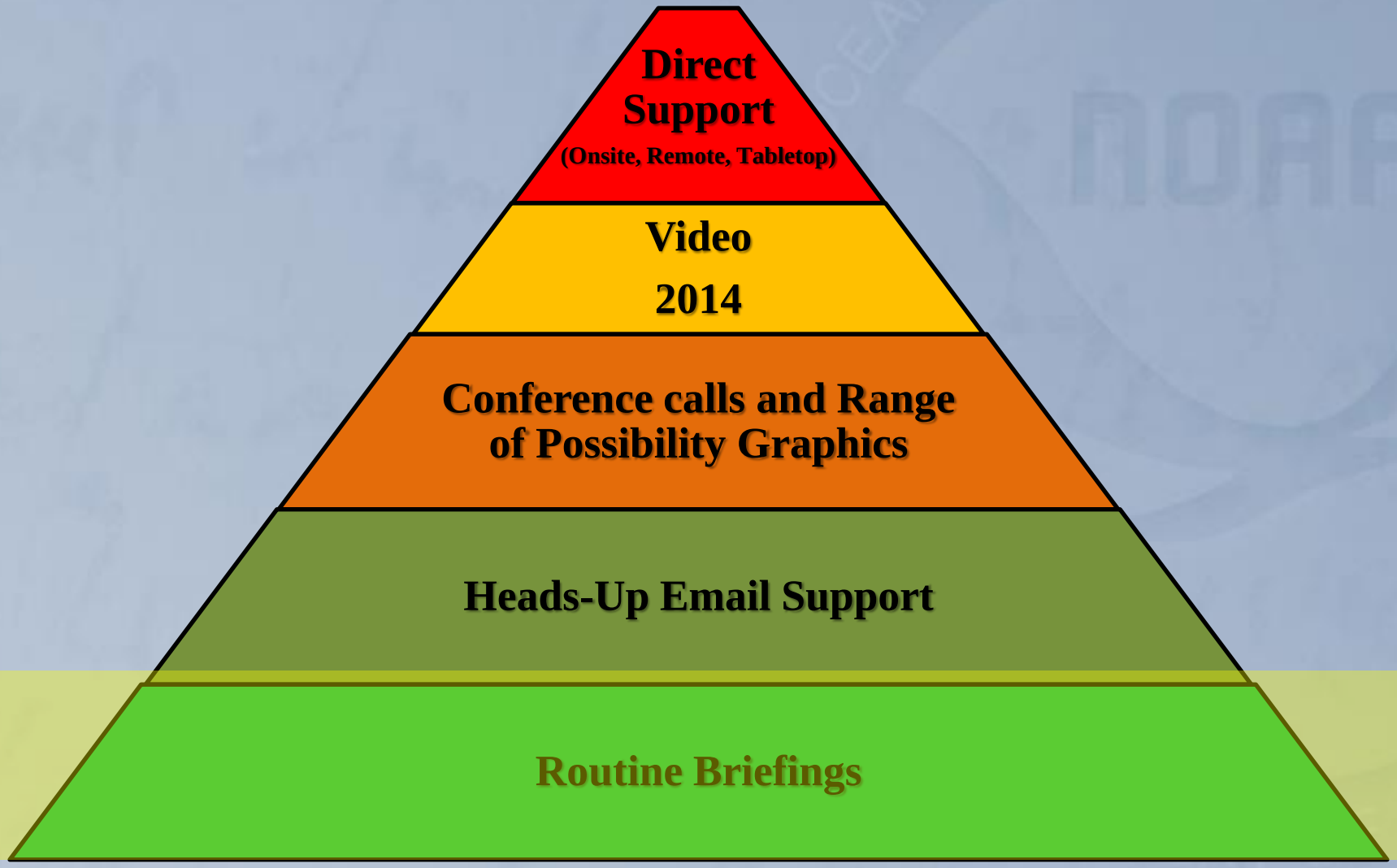
Pyramid of Decision Support Services

Hierarchy of Services to promote critical information flow.

Pyramid of IDSS



Pyramid of IDSS

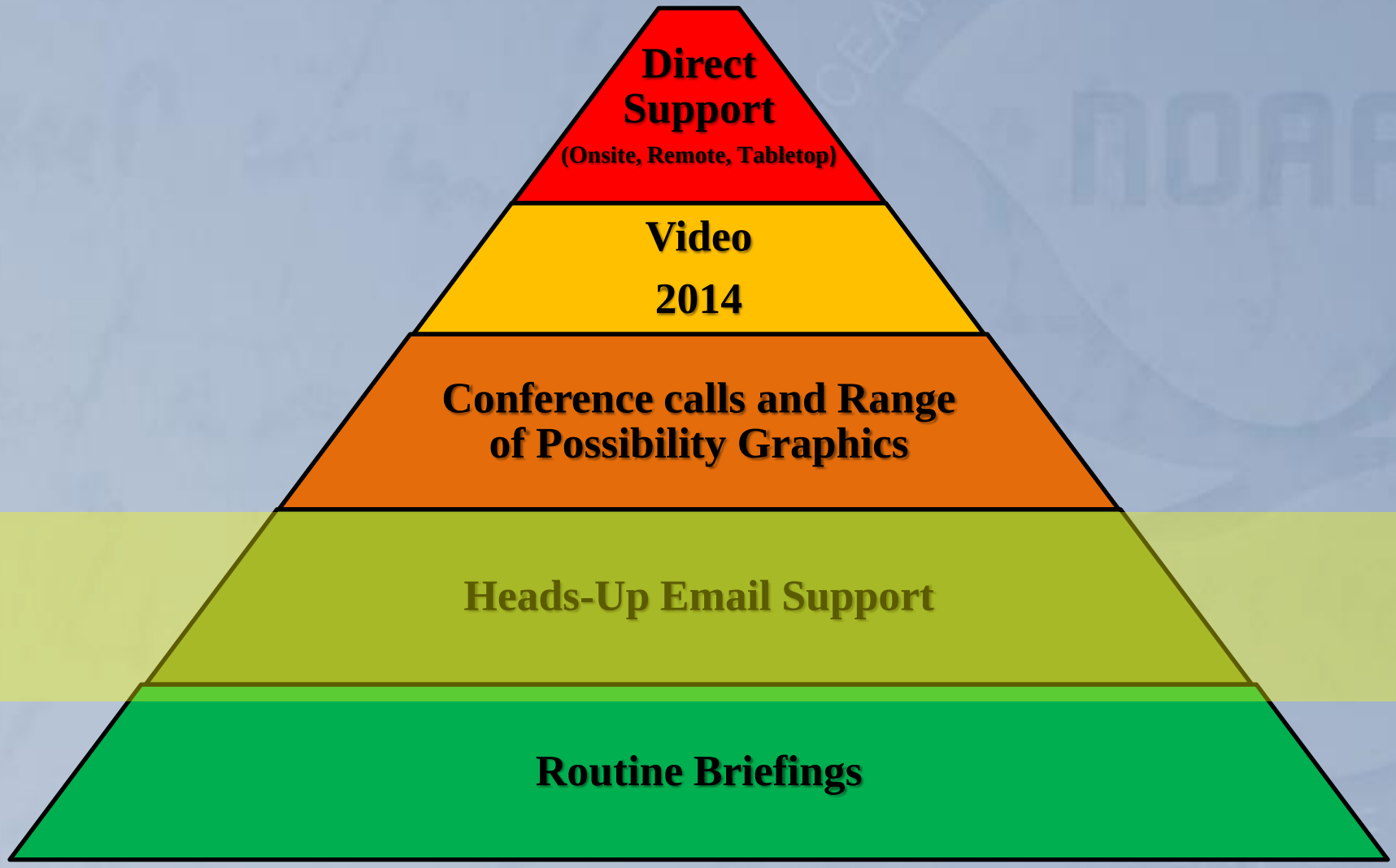


Routine Briefings

- **Monday EM Webinar Service w/Audio**

- Every Monday at 9 am (Tues – Holiday)
- 10 minute overview of impacts – 7 days.
- Gives planners situational awareness.
- Time at the end for questions.
- Slides uploaded to an EM Webpage.
- Very effective planning tool.

Pyramid of IDSS

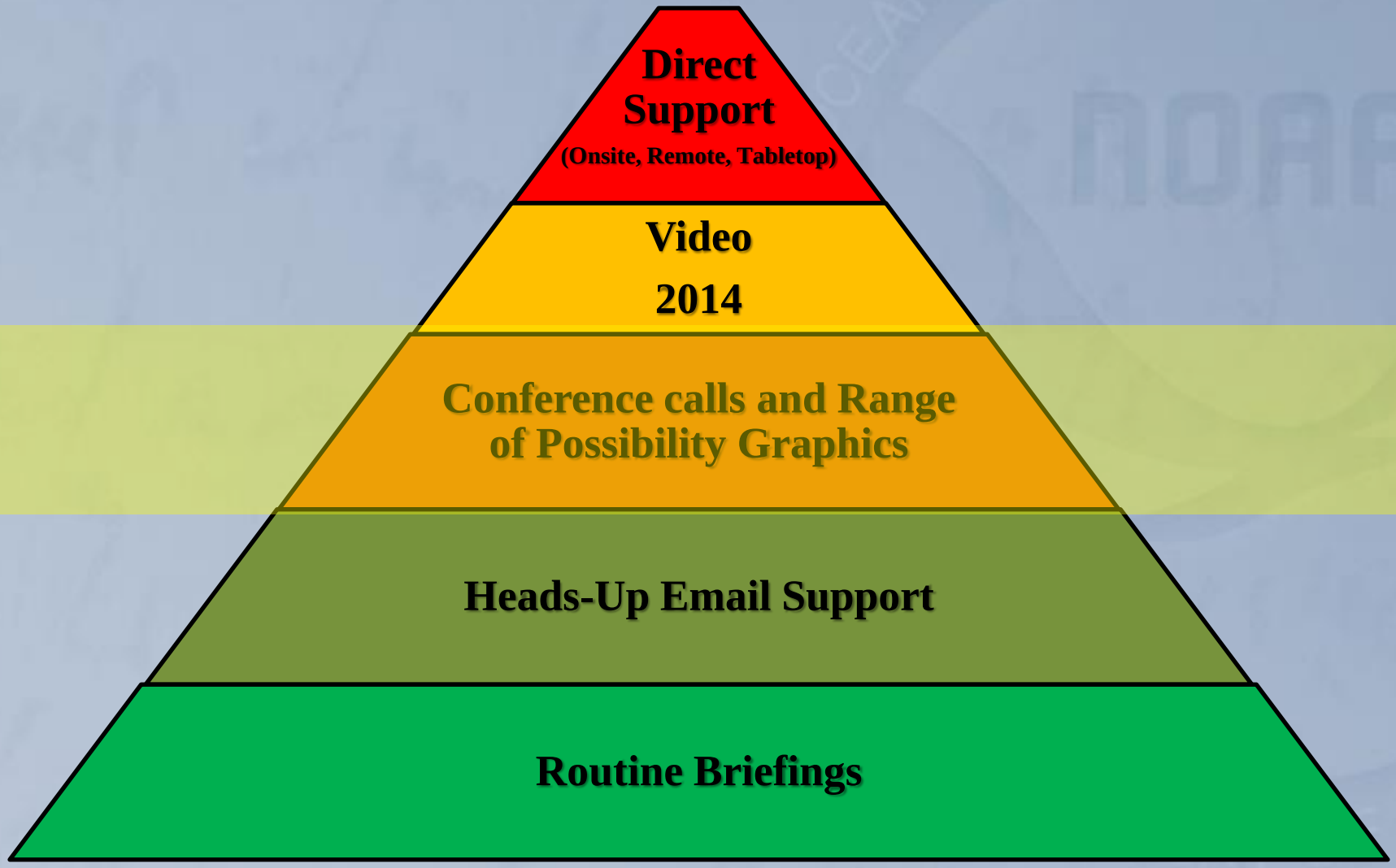


Heads-Up Email Support

- "Heads-Up" Email Support-Hazardous WX

- 1x/day – 30% confidence of headline – HWO.
- Overview and potential impacts.
- Links to seasonal graphics.
- Good transition between webinar and WWA
- Emails distributed to over 450 EM's.

Pyramid of IDSS



Conference calls and Range of Possibility Graphics

- **Best Practice: Communicating Uncertainty**

➢ **Provide a range of possible scenarios**

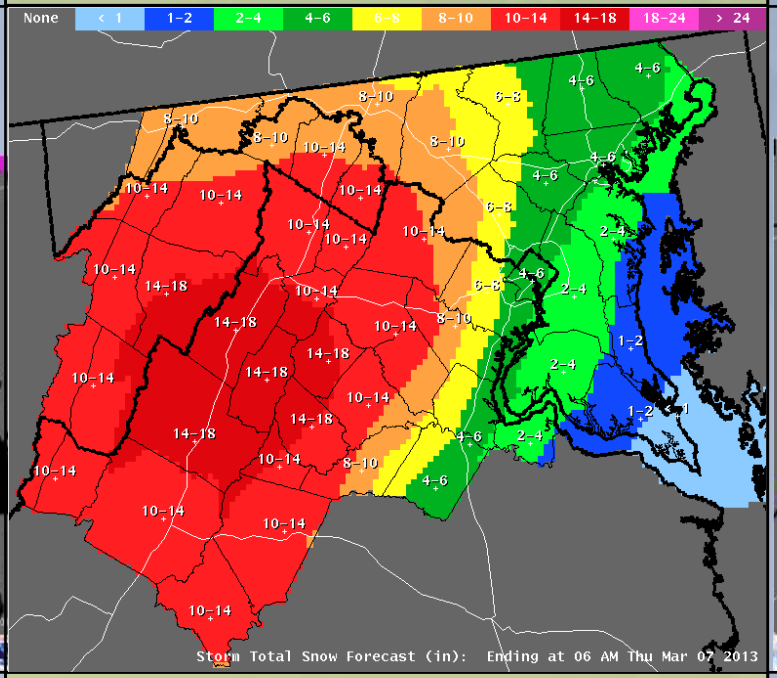
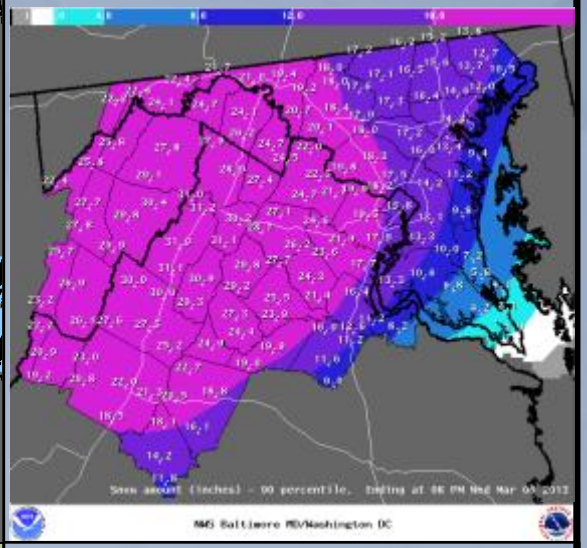
- **Winter**: Max/Most Likely/Min

Probability of Exceedence

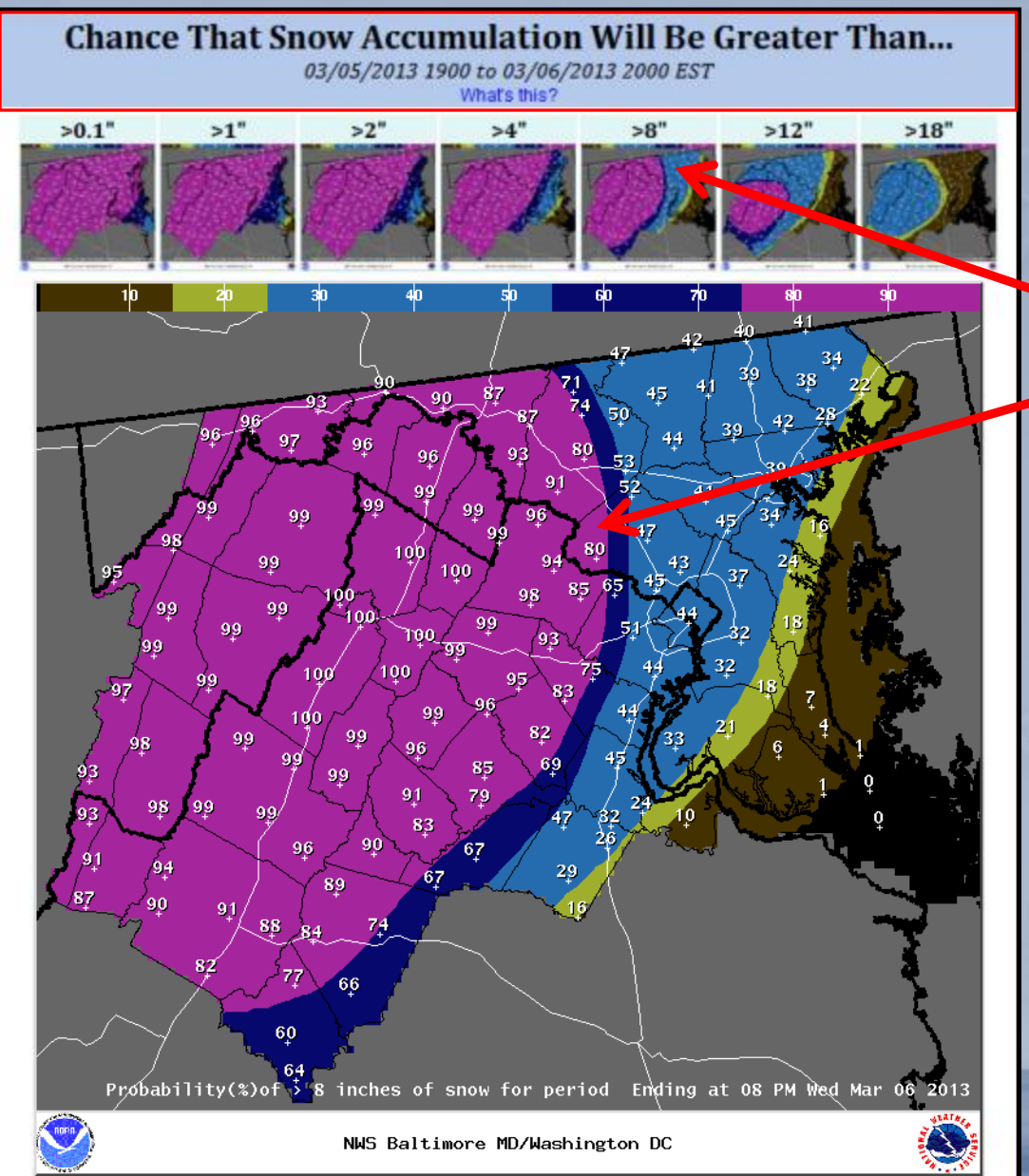
Probabilistic Table

- **Non Winter**: Significant/Most Likely/Low Impact

Minimum/Most Likely/Maximum

Minimum	Most Likely	Maximum
		
Expect at least this much	Official NWS Forecast	Potential for this much

Probability of Exceedance



Mouse over desired amount and image appears on large screen

- > 0.1”
- > 1”
- > 2”
- > 4”
- > 8”
- > 12”
- > 18”

National Weather Service
Baltimore MD/Washington DC

Probabilistic Snowfall Range Table

Can Select County/City for Local Towns

Defaults to regional table

Chance of Snow Accumulation Ranges

03/05/2013 1900 to 03/06/2013 2000 EST

County: Selected

Location	Min	Likely	Max	0"	T-1"	1-2"	2-4"	4-8"	8-12"	12-18"	>18"
Baltimore, MD	1	4-8	15	0%	9%	6%	17%	28%	21%	15%	4%
Bayard, WV	9	8-12	22	0%	0%	0%	1%	4%	47%	21%	27%
Charlottesville, VA	4	12-18	19	0%	6%	0%	4%	16%	25%	37%	12%
Frederick, MD	7	8-12	19	0%	0%	0%	1%	17%	38%	32%	12%
Fredericksburg, VA	0	4-8	14	11%	11%	6%	11%	25%	20%	13%	3%
Hagerstown, MD	8	8-12	19	0%	0%	0%	1%	13%	46%	26%	14%
Harrisonburg, VA	14	12-18	28	0%	0%	0%	0%	1%	6%	49%	44%
Leonardtown, MD	0	1-2	5	39%	3%	24%	20%	13%	1%	0%	0%
Martinsburg, WV	10	8-12	24	0%	0%	0%	0%	4%	50%	13%	33%
National Mall, DC	1	4-8	17	0%	9%	5%	11%	30%	19%	19%	7%
Staunton, VA	9	12-18	22	0%	0%	1%	0%	7%	19%	42%	31%
Winchester, VA	13	12-18	29	0%	0%	0%	0%	0%	6%	56%	38%

Location	Min	Likely	Max	0"	T-1"	1-2"	2-4"	4-8"	8-12"	12-18"	>18"
Baltimore, MD	1	4-8	15	0%	9%	6%	17%	28%	21%	15%	4%

Nor'easter/Sandy Threats

Issued: 2 PM Thu 10/25/12
Collaborated: NWS Baltimore/Washington – Wakefield – Mt. Holly – Pittsburgh

Hurricane Sandy will likely impact MD…but how much?

Threat Window (Sun-Wed)

Range of Threat: Low Impact to Significant Impact

Window of possibilities will narrow each day, with added detail

Significant Impact Scenario

Slow, Long Lasting (1-2 days)
Mod-Svr Rain Flooding (Widespread)
Strong Tropical Storm Force Winds (Statewide)
* Widespread Downed Trees
* Widespread Power Outages
Moderate to Major Tidal Flooding (Bay/Ocean)
Accumulating Snow (Western MD)
Atlantic Beach Erosion

Most Likely Impacts

Slow, Long Lasting (1-2 days)
Heavy Rain / Flooding
Gusty Tropical Storm Force Winds (I-95 & East)
* Downed trees & Power lines
Moderate Tidal Flooding (Bay/Ocean)
Ocean Rip Currents
Accumulating Snow (Garrett)
Atlantic Beach Erosion

Low Impact Scenario

Windy
Non-Flooding Rain
Minor Tidal Flooding
Ocean Rip Currents

Severe Weather

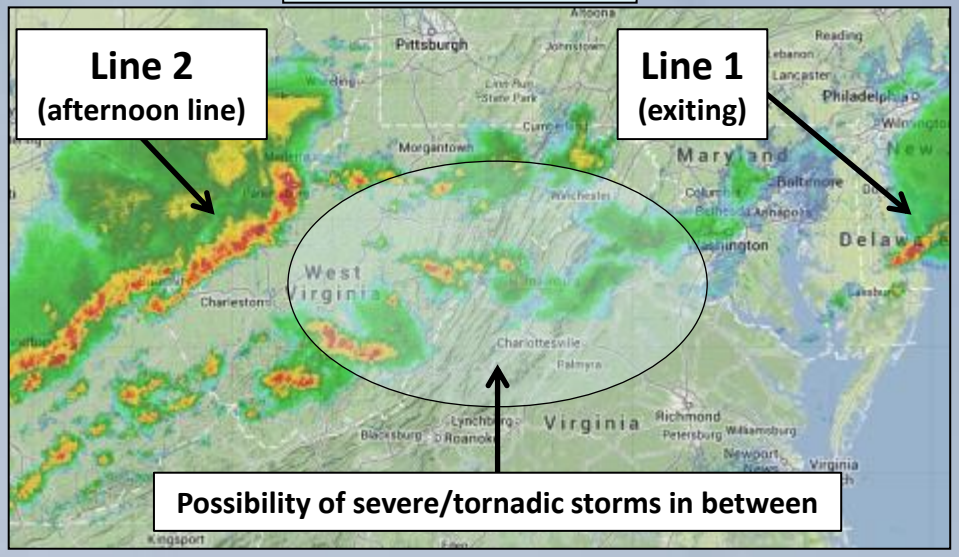
Issued
12:50 P.M. Thu 6/13/13

NWS Baltimore/Washington

Threat Window (1 P.M. – 6 P.M.)

Overview: Initial line has exited. Line of strong thunderstorms this afternoon has the potential for widespread wind damage, tornadoes, and flash flooding. Storms in between also have wind/tornado threat.

Radar @ 11:25 A.M.



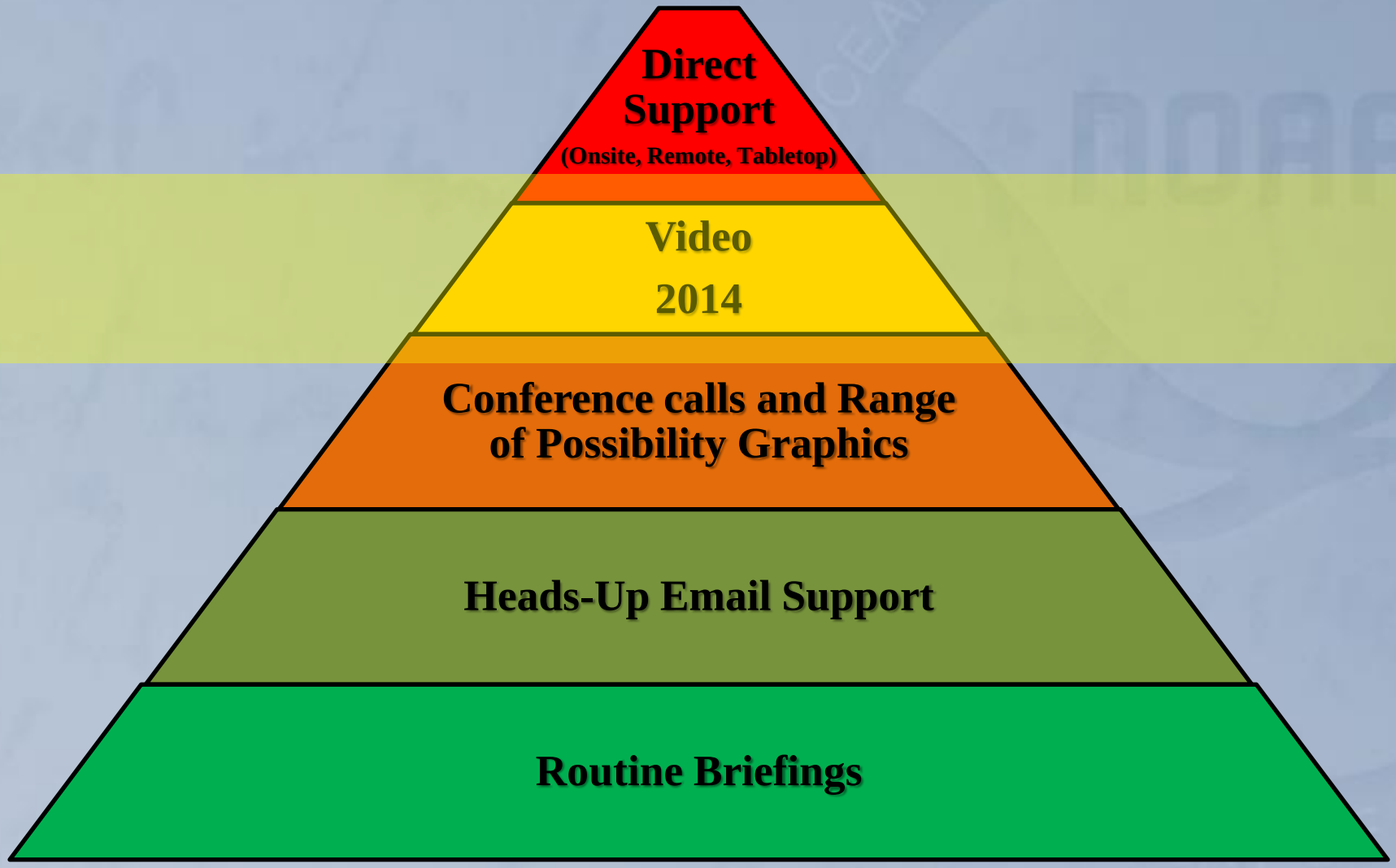
This Afternoon

- **Squall line of thunderstorms expected**
- **Damaging winds**
  - **Up to 70 mph**
- **Isolated tornadoes possible**
- **Flash Flooding likely in heavier rain areas**
- **Timing: (moving quickly west to east)**
  - **~ 1-3pm I-81 and west**
  - **~ 3-5pm I-95 corridor including D.C. and Baltimore**
  - **~ 4-6pm lower S MD**
- **<u>Greatest Potential</u>: Balt/D.C./Charlottesville and points SE.**

Reflects forecast at 12:50 P.M. Thursday
Most updated forecast always at *weather.gov*

National Weather Service
Baltimore MD/Washington DC

Pyramid of IDSS

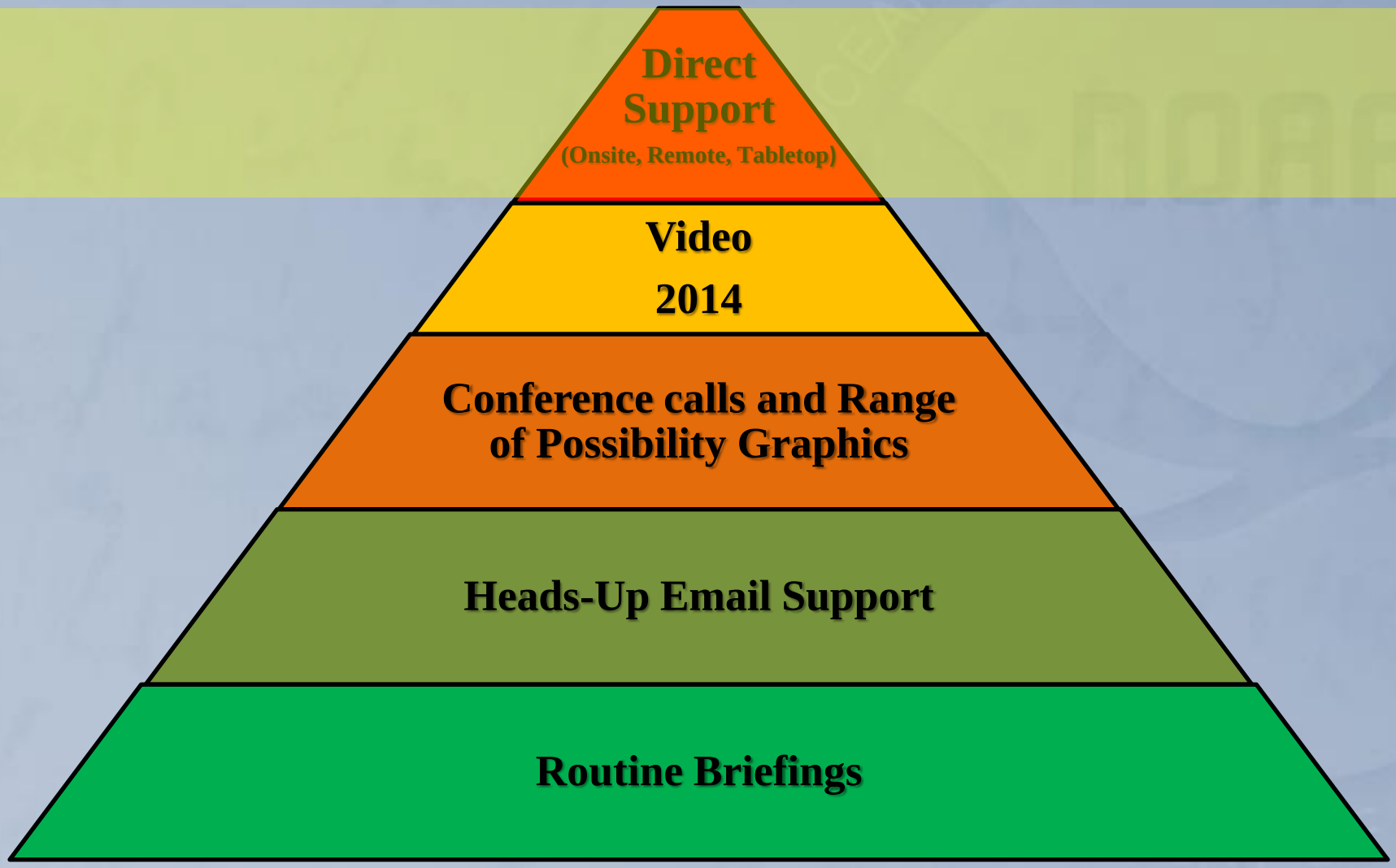


Video
2014

- **Utilized for extraordinary threats**
  - High impact, shorter lead time.
  - I.e.…Derecho, Tornado outbreak, Significant forecast change

- **Video sent to Social Media for rapid upload.**
  - Reach large numbers of people.

Pyramid of IDSS



Direct Support

(Onsite, Remote, Tabletop)

Direct Support

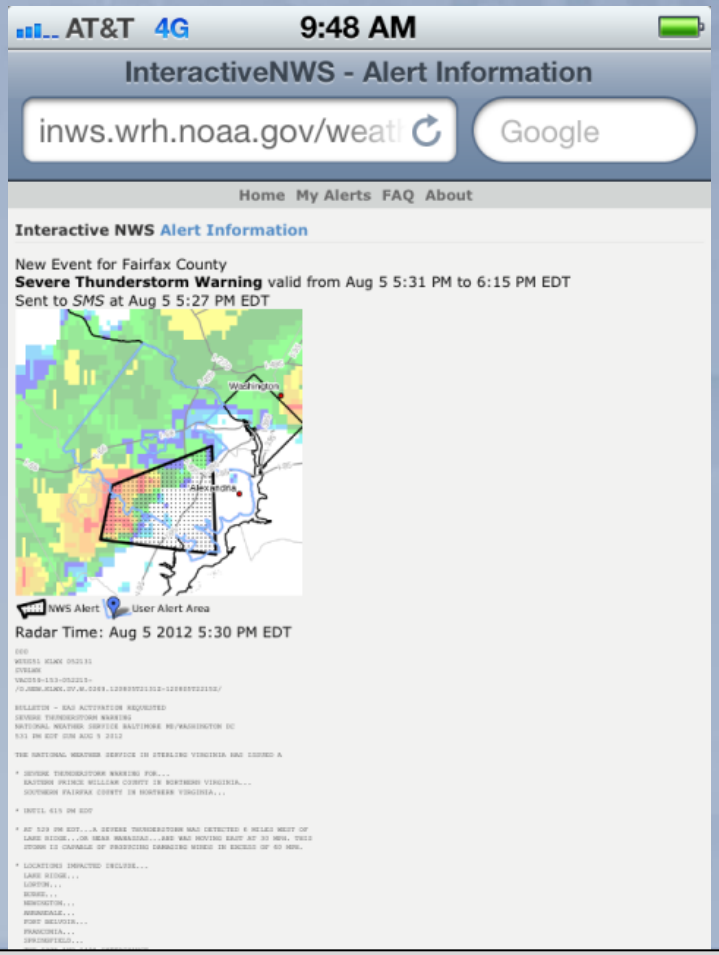
(Onsite, Remote, Tabletop)

- **High Impact Weather (State/Regional)**
  - **Sandy**
  - **Irene**
  - **Major Winter Storms**

- **High Profile Events**
  - **Inauguration**
  - **Preakness**
  - **Sailabration**
  - **Independence Day National Mall**

Remote Decision Support

- **Provide IDSS remotely from NWS Office.**
- **Daily one page briefings/calls.**
- **I-NWS event support.**



Register: http://inws.wrh.noaa.gov

Training & Tabletops

- **Best way to be ready is…**
  - **Training…Training…Training!**

Extreme Weather – Occurs Everywhere

Big questions:

Are you prepared for the next big disaster?

Does your agency have a plan in place to protect life and property?

When is the last time you tested the plan?

Training & Tabletops

- We can help you with weather exercises
  - Developing
  - Facilitating
- Examples:
  - Governor's Hurricane / Winter Storm Tabletop
  - Howard County / MEMA Tornado Tabletop
  - Montgomery County Hurricane Exercise
  - Hospital Simulation Exercises

Upcoming Enhancements

- **DSS Desk to be implemented: Late 2014.**
- **DSS capability built into office operations 24/7/365!**
- **Dedicated NWS Meteorologist for support, including "heads up" emails, conference calls, graphics and webinars**

Discussion

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