2017 Integrated Warning Team/ Partners Workshop Notes
Dec 5th; GTRI

I will be finish making edits to the notes on Mon Dec 11th.

Welcome - Keith Stellman - Year in Review

Hurricanes

- 4 named storms impacted GA, entire state in presidential disaster declaration for entire state
- First Tropical Storm Watch Warning (started inland tropical watch/warnings in 2008)
- 2 million customers without power

Drought

- 34% in of area in level D4 drought
- 63% in of area in level D3/D4 drought

Fires

- North GA - 119,000+ acres across 8 states in fall 2016
- Daily smoke in November 2016 (asthma, allergies, respiratory issues)
- Southeast GA - ~131,000 acres in spring 2017

Winter

- Jan 6/7 was a big event
- Jan/Feb record warmth led to early blooming
- March 14-16 hard freeze led to 1 billion in crop damage (peaches/blueberry farm losses)

Severe Weather (+Radar Outages)

- 2nd highest count of US tornadoes, 114 confirmed
- Jan 2nd - Albany downburst; Jan 21-22nd - Abany EF4 (41 tornadoes in GA, 27 across CWA *daily record*, high risk day); April 3rd 27 tornadoes *broke Jan daily record*; Apr 5th - 2nd high risk day 3 EF2s
- 6 presidential disaster declarations

Successes of the IWT: Prep & Response to Hurricane Harvey - Bill Wheeler, Deputy EMA in Harris Co, TX (via phone conference call)

- Things weren't running as usual, but Ike was the turning point
- IWT was used to get everyone on the same page
- As a result, 5-7 times per year they conviene with media, NWS, their meteorologists to discuss hurricane season/winter. One message: preparedness
    - Earlier forecasts from NWS to get a head start on preparing for impacts

    - Preparation starts 120 hours out, evacuation time clock starts at 96 hrs - decisions must be made immediately after ($$$)
- Harvey: 7 days out they were already discussing with NWS.Within 48 hrs, CAT 4 storm nearing coast they were prepared regardless of how the forecast/models panned out
    - NWS did a good job helping leaders make decisions; did very well presenting the "numbers"
    - With Harvey, there was "No room for error"; "had to pull out all the stops".
- TS Allison
    - NWS did good with rainfall; more of a static role because the heads up for rainfall amounts didn't come quickly
- Over time: EMA/NWS/media/private sector partners all get along/work WELL

Questions from audience

Q: How are the recovery efforts going?

- **A:** Overall very well, in some cases slow/challenging. Progress is being made even though you may not see it all. Around 300,000 homes flooded, but Texans are generous and help to raise money. Also solutions to flooding are being researched (e.g. land use).

IWT Perspective/Role Reversal: January 2017 Winter Weather Event - Lara Pagano; David Chandley; Mike Singleton; Bryan Haines

NWS Perspective - Lara - January 6/7 Winter Storm

Timeline:

- Pre-event - National and local media covering event
- Event
- Post Event- headlines made it seem like a missed forecast

Overview:

- Low pressure developed and brought moisture to the area, cold air moved in. In the afternoon, precip moved in sooner than anticipated so temperatures didn't drop as quickly (above freezing). Rain picked up and then the transition to snow/sleet was around 8 PM (snow/sleet line north of the metro). This was where we knew the 'snow event' would then be a 'freezing rain' event for the metro.

Forecast Evolution:

- From 2-3 inches in metro, to 3-4 in metro with higher totals NE (morning of event), forecast shift to the northwest GA w/ snow accumulations and storm total ice in central GA (afternoon when precip moved in), reduced snowfall totals and increasing storm total ice accum (as event unfolded)

Observed accumulations:

- Snowfall across the NE, much less snowfall in the metro, ice accum was seen instead
- Social media was outraged - but we still had supporters

Challenges

- The actual prediction of the forecast & ingesting all the data
- Communicating uncertainty - educating public of uncertainty
- Backpedaling from a forecast

Best Practices

- Emphasizing confidence (social media, webinars/emails, which helps with backpedaling)
- Using probabilistic graphics

Almost Snowjam '17: Perception vs Reality: How does the public process the information? - David Chandley

Forecast vs Wishcast:

- People want the worst case scenario
- People hold onto the forecast that they want
- People are geographically challenged

Timeline:

- Wed night: 48 hours out - Winter Storm Watch for Birmingham area
    - Message??
        - Forecast is a challenge and will change
        - Criteria for the Winter Storm Watch was confusing
        - Viewer locks onto the 2-3 inch (worst case scenario)
- Thurs night: 24 hours out - Winter Storm Warning for the whole area
    - Impacts within 24 hours -> decision making time
    - 2-5 inches on graphic, but what will the viewer remember?
    - When will the viewer return for new info and on what platform?
- Fri night: transitions between rain/snow/sleet
    - N GA people were happy
    - Metro people (especially with ice accum) were very unhappy

Takeaways:

- Thankful it was a friday night/saturday morning and not a school day event
- "Warm nose" altered snowline
- Pre-treatment of roads by GDOT was key

Suggestions:

- Providing feedback as the event is unfolding
- Would be good to know the impacts are in your areas? (From the EMs)

<u>Questions from audience</u>

Q: From Gene Norman: Could the approach be similar to what we do for tropical weather? “The forecast is this, but in a few hours we will get a new model run.” Scenario based forecasting. “If this scenario holds out then X, but if this scenario unfolds the Y”

- **A:** Best and worst case scenario could and has been used. People don’t respond too well to it. It should be used more often though,
- **A:** From Dave: We have experimental products available to the public for best and worst case scenario for use strategically

Q: From Keith (to media partners): Is there a way to go back from the worst case forecast?

- **A:** From David - “Yes there is.” People are being deployed to counties. Bounce from person to person to have a visual for the audience. Majority of people get info from TV and it’s easier with live tv than the social media platforms.
- **A:** Katie Walls- social media is the first place for backpedaling. FB puts most popular posts at the top so most recent info isn’t seen unless on the page. Old information is still circulating. “It’s a constant battle with social media. Not everyone is using twitter.”
- **A:** From another media partner - Beware of FB, put a disclaimer on the information. Even the people getting deployed could have the worst case in their head. It has to be said in the briefing that there are more than just one scenario with one set of numbers

Q: From John Trostel (to media): Time stamping and dates on graphics (as a solution to issues with FB algorithms and mis-sharing of old information)??

- **A:** They get cropped out when shared.
- **A:** Another media partner - new FB algorithm is terrible. What helped: pin information to the top of the FB page, choose 1 post to share and ask people to share that post and then update that post (after sharing the changes populate even through the shares, so it’s higher on the FB feed WITH the latest information)

A local EMA Perspective - Mike Singleton

Communication

- Is all about getting the info in and passing it along
- Volume of the forecast can be challenging. It was hard to keep up and disseminate everything (in reference to Irma). Overall, more IS better.

Preparation

- Started prepping for a snow event,
- Considering worst-case scenarios to prepare for the worst and hope for the best,
- When forecast changed to ice plans were already in place and much couldn’t change due to limited resources

Response

- Board Of Education (BOE) closed schools 2 hrs early on Friday
- Road Dept had 12 hr rotations to started pre-treating in afternoon

Challenges

- Forecast change doesn't make too many adjustments cause limited available resources

Best Practices

- Prep for the worst
- Awareness/communication are important
- Utilize as many tools as possible (chat, webinars)

Bryan Haines - GDOT Perspective

- Proactive planning starts with great partnerships (Viasala, NWS, GEMAs meteorologist, private partners)
- 55 RWIS stations across the state (plans for expanding) for usage by everyone to "help them, help us", enhanced brining operations
- Utilize weather industry for weather briefings, impacts, because early decisions need to be made: "93% of people want to make decisions the night before"
- GDOT winter weather enhanced plans so no areas are left out
    - 18 salt and plow teams responding in the metro
    - 31 - 5000 gallon brine tankers - statewide
    - Special response teams
    - 15 multi agency traffic strike teams
    - Tech improvements with partners (WebEOC)
- Enhancements by GDOT
    - Multipurpose equipment
    - Snow plows/salt spreaders
    - Increased capabilities for brine production (37,000 gallons/hour , brine storage (711,000 gallons), brine tankers (31)
    - Continued training and technology development
- When it changed from snow to ice, they reached out to Forestry and State Patrol for help - site reports and debris

Questions from Audience

Q: From Ryan Beesley: When transitions occur, do you prep differently vs just a snow event? Also does the rain effect pre-treatment?

- **A:** From Brian McCallum: Going with brine was a big hesitancy because of the typical evolution from rain first. Some districts can start primary and secondary routes about 28 hours out. The hard decisions just have to be made. It's not about right or wrong initially, but when the rain comes how do we move resources to the areas the forecast changed? Tactical decisions change vs making the decision to treat now.

Panel Discussion: Decision Support for a Record Breaking Hurricane Season - Jason Deese ; Brandon Bolinski ; David Fite ; David Maske. Moderators: Vaughn Smith & Adam Baker

1) For GEMA: The Governor declared a state of emergency for the 6 coastal counties and then expanded twice more for the remaining counties for Irma. Can you talk a bit about the coordination that went on to reach those decisions both from and internal and external partner perspective and how the uncertainty in the track affected those?

- **A: From David Fite** For Irma, the track changed between each advisory. They consulted with Will Langston. Coordination calls used to determine best plan of action. High tide was matching with NE quadrant. Coordination: shelters, evacuation and reentry process and do we need a reentry team for cleaning debris. Changing track was an issue. Focused on if it would be a water or wind event. 1-2 million dollar of debris. Lots of different requests from the field.

2) For FEMA: You have an interesting dynamic when it comes to DSS and tropical systems in that you actually embed someone at the Hurricane Center and have other partners come in behind you to help out at FEMA. Talk a little about how that works and ways it enhances your decision support services.

- **A: From Brandon Bolinski** In the past (90s), with limited resources someone was at the center to help with communications. Even in 2000s, some EMAs had issues getting the forecast. Today, the message is easy to get out, but the issue is how to interpret the products in order to make decisions. They help to support the state offices in key decision making. Use of NWS for key changes.

3) For Georgia Power: Would also like you to talk a little about how the large model fluctuations in track affected your planning and staging for tropical events this year, but especially as related to Irma?

- **A: From David Maske** Direct landfall was a worst case scenario, but an indirect landfall was better as far as impacts. As the forecast shifts they think about shifting resources and where they need to be and when can they move them quickly and be ready to respond. Matthew helped as “practice” but Irma was different
- **A:** They start 5 days out from landfall at multiple models. Confidence is gained as it gets closer and communication internally/externally begins. Confidence levels is huge.

Q: From Gene Norman: One of the big customers for private alerts is Senior Care. He was asked for a scale comparison for the hurricane. How do you feel about reference points from extreme events?

- **A: From David Maske** - I can’t control how the public responds. You can only control the planning process and the communication from the process. Communication can be shared internally. With stakeholders, it’s best to wait until confidence is higher before making a decision.
- **A:** From a planning perspective, they should look from an all hazards approach. If they are doing that appropriately, ‘pulling the trigger’ gets easier.
- **A:** Critical thresholds should be known to help make the decisions easier. Anything beyond 5 days is ‘La La Land’ and will change.

- **A: From Jason Deese** Strength of storm doesn't equal impacts from storm. Education should be used to help clarify these things.
- **Note: From Paula:** Problems with using past events is that the event isn't the same for everyone. It depend on where they were in the path of the storm so you must be careful using comparisons for storms/floods.

4) Q: For GA Power: How early are you pulling resources from out of state?

- **A:** As early as they have to. For example Irma, the wind severity changed so they had to determine when and where to stage and pull resources with the goal of public safety in mind. They want to make sure things are safe for the public and get them back to normal (hospitals, nursing homes). Looking at confidence in forecast, severity of impacts, and location of impacts and move accordingly.

Q: For Brandon: What is the level of coordination for FEMA region 4 and the defense coordinating office and what effects there are between the state?

- **A:** They are close by. They can get forces out quickly. From their experiences, it is impressive.

Q: For GA Power: How do you schedule man power to get it where it needs to be? Matthew was impressive with the GA Power trucks heading out as the media headed in.

- **A:** Matthew was very concentrated and resources were available everywhere (6,000 resources). For Irma, on the heels of harvey, the utility resources were in Texas already and were needed in Florida. Resources came from 28 states and Canada, 68% of GA power customers were impacted (worst event to impact GA). Logistically, the team was able to shift and enact the plan. No events are the same, there is a ton of adjusting.

5) Q: For Georgia Power: When Irma was impacting the area there came a point in the early evening when operations to restore power were halted due to 'unsafe conditions', what are the thresholds that determine safe vs unsafe conditions in regards to weather conditions?

- **A:** Gusts were very significant across the area. Damage assessment showed dangers to employees and to the public. Bucket equipment can only withstand 35 mph sustained winds from the manufacturer (no gust threshold provided from manufacturer). North of Macon, GA Power waited 24 hours to put people on the ground. Below Macon, was just 6 hours before their people could get out. 24,000 damage events on their system.

Q: From audience Last several storms, they faced criticism for taking hotel rooms for evacuees/employees?

- **A:** They rented sleeper trailers to put their people up. Keep hotels open for displaced people.

Q: After this season what were decision points that came about this year that were different that you will prep for, for the next active season?

- **A: From FEMA** Make decisions early and just live with them, but how early can you do that when you don't know what will pan out?
- **A: From GA Power** Communication and using social media. They moved to live people answering the phones and giving updates. You can only react.
- **A: From GEMA** Standardization. They could do things collectively with what needed to be done. This, plus additional training this will help no matter the disaster.
- **A: From NWS** This was first tropical storm warning. The sustained winds didn't pan out. Not all nearby offices issue the same products inland (high wind warning vs tropical storm warning) which made issues for media with discontinuity. As event unfolded, NHC wanted to downgrade the storm because of sustained winds, but there were high gusts and trees down and people impacted. We kept the warning in place and collaborated with NHC even when it wasn't a tropical storm.

6) Q For NWS: Can you discuss how DSS changes for you for an event that is trending stronger vs. one that is trending weaker?

- **A:** Communication is key. How do we change the forecast? It's easier to strengthen a storm than to pull back from a storm. Between the media/public/partners, they all have different needs. For TS Nate, the tropical storm warning was dropped for the NE, but more communication would be necessary for the EMs there based on the info we were giving them (after they've already ramped up). As long as intentions are communicated well, it doesn't matter the forecast.

Q: Would it be good to have a 'warning' that comes across for changes/adjustments to the forecast to draw attention to major changes no matter the weather hazard?

- **A: From NWS** Trying to communicate adjustments, or even a webinar can be difficult. Emails and chat have been utilized. We can send updates to warnings changing impacts etc.
- **A: From Steve Nelson** The HLS can be used for this, with what's changed right at the top of the product.
- **A:** Forecast may change but impacts don't always change, so forecast discussions are very helpful.
- **Note: From NWS Columbia MIC** With the mismatch in tropical headlines. 2018 season they will be able to issue tropical headlines.

Panel Discussion: Customer Needs, Services and Utilizing NWS Products - Derek Kinkade (1); Will Lanxton (5); Crystal Mendoza (4); Spencer Hawkins (2); Danny Gant (3); Moderators: Nikole Listemaa & Ryan Willis

1) Q: For All Panelists, Aside from emails and briefings, how much do you monitor NWS Atlanta's Facebook, Twitter, and website? During a winter storm or severe weather event, does your use of these platforms increase? What is one way we can improve our social media presence?

- **A: From Derek Kinkade** Twitter and FB aren't monitored daily, but the website is monitored daily. The webinars/emails help to get the info in one place.
- **A: From Spencer Hawkins** Uses the NWS page twice a day. Twitter more often, FB is difficult to get the latest info. Chat is a good resource.
- **A: From Danny Gant** Monitor many offices using a social media dashboard to look at upstream and surrounding offices. Increases with high impact weather to gain situational awareness upstream. Social media monitoring changes by event using hashtags to follow each feed better through an event.
- **A: From Crystal Mendoza** Checks website daily, doesn't use twitter but uses our FB page. Special weather briefings help determine staffing.
- **A: From Will Lanxton** Good to not put too much out when nothing's going on, so when we do put out content it is deemed important.

2) For Crystal (Philips), How do routine and high-impact weather briefings help with your decision-making process during adverse weather? Do these weather briefings influence your critical thresholds for taking action? Please tell us how you share the information contained within the briefings with other employees to keep them informed and prepared for adverse weather.

- **A:** Routine briefing helps to plan the week and is disseminated to a safety team, so then schedules are tweaked. In bad weather, they rely on website and special briefings, staffing is determined based off of parameters (temperatures, precipitation). All images (from emails/briefings) are reported to senior leadership in order to make recommendations. Imagery is used for an email to leadership to send to staff with what will 'likely' happen plus the 'best and worst scenarios' off of social media. There are backups so there aren't staffing issues.

3) For Derek (WTVM), How do you best handle discrepancies between weather forecast offices during high-impact weather situations? How has the consistency amongst offices improved or declined over the past several years?

- **A:** They have 16 to 26 counties they cover for 3 different NWS offices (BMH, TAE, FFC). Improvement is there for severe weather and winter weather. There's different criteria between offices (wind chill advisory), to the viewer this is hard to grasp without seeing the warning on the map. They just have to explain which is a struggle with winter weather. Its his job to take the info and explain the information and get the impacts out.

4) For Spencer Hawkins (Bibb County EM), Tell us how your relationships with the media and other private sector entities have developed and evolved since you have taken office. How beneficial are these relationships during large scale events?

- **A:** Partnerships have gotten 'so much better'. They started involving the media in the process, even on severe thunderstorms or training so they understand who they are and what everyone does and also what the needs are for each entity. Regardless of the info out there, he knows there will be someone reporting live because that's what they want.

For private sector, understanding their needs and they run 24/7 and have many needs. Keeping data flowing even day to day makes major events easier.

- **Q/Note: From Ryan Beesley** They get flack from the putting the reporters out in the 'storms', but it is their job to visually show what is happening and put themselves out there. (Comparison to firefighters doing their job, even though there are safety issues)
- **A:** The EMA can't do that, but the media can and it is necessary. The information needs to be out there, but safely.
- **Note: From David Chandley** Information shared in chat helps with verification, despite reluctance to post in chat please do with locations
- **A:** The HAM radio team monitors chat and tries to share information.
- **A: From Dave Nadler** The NWS works to verify with the first responders and then send out the LSRs (local storm reports) as soon as we verify the report. It's our job to verify whats going on outside as well as QCing the info before it goes out on chat, also within updates to warnings.

5) For Danny Gant (GSP): Tell us the benefits your office has gained by cultivating relationships with emergency managers, the media, and other National Weather Service offices.

- **A:** It's a team that needs trust and cooperation. We try to be 'selfless' because there's competition between who puts the word out, which can create uneasy feelings. For EMAs, proactive engagement has been helpful in warning decision process (short fuse) to have 'eyes and ears on the ground', especially at the end of the event. Updates on damage/stream levels etc has been helpful. It's not as necessary for longer fused products, but information from the ground is still helpful (I-85 always seems to be the rain/snow line - '20 miles can make all the difference in the world'). For the media, it's great to relay storm reports. We look at media pages so being proactive and calling us is nice.

6) Q: For Will Lanxton How do relationships enhance decision making?

- **A:** It's phenominal, other offices have noticed. These relationships with partners help find out interests and trigger points (needs/timelines) and then communicating that. (On coordinating with other NWS offices) GEMA services all of the states, so being the only NWS office in the state, we act as the state liaison with coordination of forecasts/warning etc. Coordination with all entities (NWS/state) has been very helpful.

7) For All Panelists, Thinking outside the box, please tell us of any NWS Products or Services you would like to see in the future.

- **A: From Danny Gant** We don't always know what to provide emergency managers (fire weather parameters), there's lots of trial and error (communication and feedback). GSP has a spot DSS program (similar to spot forecasts) for outdoor concerts (etc) that creates graphics and posts them on a dedicated webpage, hidden from public, that is sent to the EMA (real time situational awareness machine), even when updated. GSP is developing a 3 tier approach to DSS (Starts with a 1 pager, moves to high impact briefing, then live briefings for the highest of impact events)

- **A: From Spencer Hawkins** With all the yearly outdoor events, a way to have private emails/websites for these events so they don't have to continuously contact us. Working closer with the SERFC to improve gauge forecasts, since they are sometimes 1-2 feet off.
- **A: From Will Lanxton** Continue to increase capabilities, coordination, and in-person DSS (e.g. Kent Frantz to SOC, Dave to SOC for Matthew/Irma) is very helpful to everyone at the state and local level in the SOC/EOC to have multiple meteorologists to convey worst/best case scenarios, thoughts, answer questions. Collaboration with parent agencies (talking with SPC, WPC, NHC) to get a single forecast would make more sense for dissemination and forecast consistency.
- **A: From Crystal Mendoza** Suggested an internal app for emails, youtube briefings, best practices but with push notifications. Somewhere where the internal team can put information/best practices to not 'recreate the wheel'. Having a 'One stop shop' from the phone and not just on PC.
- **A: From Derek Kinkade** Not many complaints/needs, but chat is a great tool to disclose any extra information we may be doing in the office. There's lots of great weather forecast support.

Note: From Spencer Hawkins On working with the media, local EMAs shouldn't forget their small 'media' (local papers/radio stations). They are very loyal and can help provide more information on the back end.

Winter Weather Outlook, Tools & Resources - Adam Baker & Dave Nadler

- Likely La Nina through winter, back to neutral for spring
- 5 year break since last La Nina
- La Nina keeps the subtropical jet further north, but the polar jet can dip further south leading to more "wedge" CAD events
- Latest CPC outlooks:
    - 40-45% chance of warmer than normal
    - 33-50% chance for drier than normal
- Local studies show we could have near normal precipitation and temperatures for the La Nina setup
- Significant ice events have higher probabilities in La Ninas winters. Wedge pattern increases the probability of these events as well
- Challenges predicting winter p-type
    - the warm nose
    - ever changing atmosphere
    - predicting changes in the atmosphere
- Tools and resources:
    - RWIS sites for air and road surface temps
    - SPIA index for ice impacts (ice accumulations + winds)

    - Severe Weather/Tornadoes: For low end and stronger tornadoes, moderate to strong La Nina has highest average of tornadoes
- Other influences:
    - Arctic oscillation controls strength of high pressure at the north pole (forecast 2 weeks out)
    - Siberian snow cover extent can determine the temperatures when we have cold snaps and arctic air is pushed into our area, Northeast Pacific SSTs

Questions from Audience

Q: From David Chandley Is there a CPC scorecard?

- **A:** They do have a verification page. Precipitation verification does well, but the precipitation doesn't have as great of scores.

Breakout Sessions

Radar Interpretation/Messaging - Steve Nelson

- Radars find targets made of water, but it can be fooled
- It listens for a reflected signal. Amount of signal returned in reflectivity
- Doppler effect is a change in frequency of a moving object. (Green is towards the radar, Red is away from the radar)
- Dual polarization sends horizontal and vertical radar waves, can now see shape of weather targets
- Limitations: resolution decreases with distance, the earth is curved
- **Discussion Questions -** Impact Based warnings allow the NWS to make tornado warning a little more clear, but large uncertainty remains

Questions From Group 1

Q: How can we better communicate the threats internally to the warning team?

- **A:** For Flooding, having the different types of flooding, so the impacts are different. Terminology should match with the impacts. sometimes the impacts aren't as useful to the everyday person 'Joe Shmo's backyard gets flooded' vs 'the city square could see 3 feet of water'

Q: Is the science getting there to forecast warnings? and then communicate that information?

- **A:** Things change so quickly, which make it difficult to forecast and then trying to keep down false alarm rates as well.

Impact-Based Decision Support - NWS Peachtree City Plan & Capabilities - Jason Deese & Dave Nadler

Motivation:

- Adjusting to meet expanding partner needs

- Schedule modifications (having a dedicated DSS meteorologist to interact with customers/partners)
- Training (on a local level to make sure all meteorologists are on the same page for support)
- Briefing/notification capabilities (fine tuning what works, but also experimenting with new ideas/technologies)

Routine IDSS/Weather Support:

- Day to day support, 7 day public forecast, specific forecasts for aviation/fire weather, graphics generation for web and social media, nws chat, daily inquiries

Routine - Enhanced (Remote) DSS:

- Non-routine/elevated impacts, outlooks, emails/briefings and updates, spot forecasts, dedicated PIO for interviews

Onsite Support/IDSS:

- Meteorologist deployed on-site in conjunction with local/county, state or federal EMA/core partners, GEMA SOC for high impact events, large/public outdoor events, ICC/JIC for multi day event or HAZMAT/high impact weather event, FEMA region 4 support, exercises/training

IDSS examples/capabilities:

- Real-time video updates in operations - can be uploaded, can be done quickly in operations, just 30 second updates
- Conference room technology - smart board, video camera in conference room, in person split screen presentations (person giving presentation + presentation on the bottom)

Vision for future of IDSS:

- Daily briefings to partners on significant events, but how to we satisfy emerging needs with the same amount of resources that we already have. automation will be key

IDSS Forecast Generator -

- Delivers specific customizable graphics together for a specific event including partner graphics and a forecast discussion (similar to a spot forecast). Potentially as a webpage or pdf that goes out to all interested parties (EMA, county officials, city officials, superintendents)

<u>Questions From Group 2/3</u>

Q: Are your staff required to take ICS training?

- **A:** Yes. Get ICS courses done 100,200,700,800. 300,400 for deployed meteorologists

Q: For the event based IDSS system, are you working with EMA people, media partners to just see what works and what doesn't?

- **A:** We want it to be a collaboration, so that's definitely possible.

Q: Issues with the video snippets is that someone has to watch and take notes on the video.
- **A:** These aren't instead of webinars/emails, but in addition to.

Q: Overall, any chance that hours we are here can be used for CEM qualifications?
- **A:** Can be determined at a later time.

NWS Initiatives - Ryan Willis

Communication Tools & Resources

- Communicating Threats: Wanting to emphasize short-term (Day 1) because probabilities can be confusing and misinterpreted, colors and threat wording
- *FFC Threat Graphics*: More of this during big events, threat bars, timing graphics
- *Google Page* for submitting storm report, replacing the old page,located in same location on website
- *Mobile NWSChat* - mobile - older apps not compatible with newer phones
    - Monal for iphone, Xabber for Android - instructions in IWT Atlanta Page

Probabilistic Snow/Ice

- Purpose: range of snowfall possibilities to communicate uncertainties
- New: Ice Accumulation Official Forecasts available, Probabilistic snow/ice still experimental and internal
    - Model Enhancements - higher resolution ensemble members
    - NWS Columbia and Charleston included
    - Title Updates
- Range = % chance of snowfall in a range
- Exceedance = % chance of seeing >= amount in table
- High End Amounts: most plausible worst-case
    - Only 10% of the models used in the experiment have snow amounts higher than what is shown
    - Removes outliers
    - Based on official forecast
- Low End
    - 10% of the models used in the experiment have snow amounts lower than what is shown
    - climo low end amounts will typically show zero
- Pre-defined cities for each county

*Hazard Simplification Product Consolidation = Highlight **WHAT, WHEN WHERE***

- Winter Storm Watch, Winter Weather Advisory and Winter Storm Warning
- Blizzard Warning and Ice Storm Warning unchanged

Impact Based Warnings (Year 3)

- Base Tornado Warning - radar indicated
- Observed Tornado Warning - Confirmed - radar debris signature, trained spotter, law enforcement, etc Tornado Damage Tag .. Observed possibly Considerable
- Tornado Emergency - confirmed by Radar Debris Signature
  Trained spotter, law, EMA = Damage Tag “Catastrophic”

Questions From Group 1

1) Question - Numbers vs words - numbers are much easier to understand 1vs2 is better than marginal and slight
2) EM - love threat graphics
3) Yaxinat? Another option for Android suggested, Monal hyper links not working
4) When does the SNOW Prob start? Once we start issuing snow in forecast - will not do that before 72 hours.

Questions From Group 2

1) Can you see other storm reports on the local page? No, but there are other locations (EDD) where you can see that
2) Question about “weather spot”, asking about DSS for an event - question from Butts County
3) Are the snow probabilistic forecast for a time or event? For an event - 72 hours
4) App to use chat on iphone I have problems but works on IPAD
5) SNOW Impact Forecasting - Brandon FEMA

Questions From Group 3

1) How consistent are the local snow probabilistic forecasts with WPC forecasters - James

Open Discussion / Direction of IWT Group (North & Central Georgia)

Wrap Up

Everything will be posted here: www.weather.gov/ffc/iwt2017

8:30 AM **Welcome / Logistics (Topic: "Year In Review")**
Keith Stellman (Meteorologist In Charge - National Weather Service Peachtree City)

8:45 AM **OEM Harris County, TX – Successes of the IWT: Prep & Response to Hurricane Harvey**
Bill Wheeler (Deputy Emergency Management Coordinator)

9:00 AM **IWT Perspective/Role Reversal: January 2017 Winter Weather Event**
Presenters: Lara Pagano (Meteorologist - NWS Peachtree City); David Chandley (Chief Meteorologist – FOX-5 Atlanta); Mike Singleton (Director – Fayette County EMA); Bryan Haines (State Emergency Operations Administrator – GDOT)

10:00 AM **Break**

10:15 AM **Panel Discussion: Decision Support for a Record Breaking Hurricane Season**
Presenters: Jason Deese (Lead Forecaster - NWS Peachtree City); Brandon Bolinski (Regional Hurricane Program Manager – FEMA-Region IV); David Fite (Operations Manager – GEMA); David Maske (Emergency Operations Manager – Storm Center at Georgia Power)
Moderators: Vaughn Smith & Adam Baker (NWS Peachtree City)

11:00 AM **Panel Discussion: Customer Needs, Services and Utilizing NWS Products**
Presenters: Derek Kinkade (Chief Meteorologist – WTVM Columbus GA); Will Lanxton (Meteorologist – GEMA); Crystal Mendoza (Emergency Planner – Philips Healthcare CCSC); Spencer Hawkins (Director – Macon-Bibb County EMA); Danny Gant (Meteorologist – NWS Greenville-Spartanburg SC)
Moderators: Nikole Listemaa & Ryan Willis (NWS Peachtree City)

11:45 AM **Lunch**

12:45 PM **Winter Weather Outlook, Tools & Resources**
Presenters: Adam Baker & Dave Nadler (NWS Peachtree City)

1:15 PM **Breakout Sessions (30-minute sessions w/ ~10-minute break between sessions)**
Moderators: Tish Atwell & Lara Pagano (NWS Peachtree City)

1. Impact-Based Decision Support: NWS Peachtree City Plan & Capabilities
   Presenters: Jason Deese & Dave Nadler (Senior Forecaster / WCM - NWS Peachtree City)
2. Radar Interpretation/Messaging
   Presenter: Steve Nelson (Science & Operations Officer - NWS Peachtree City)
3. 2017-18 NWS Initiatives
   Presenter: Ryan Willis (Meteorologist - NWS Peachtree City)

3:15 PM **Open Discussion / Direction of IWT Group (North & Central Georgia)**

3:30 PM **Workshop Ends**