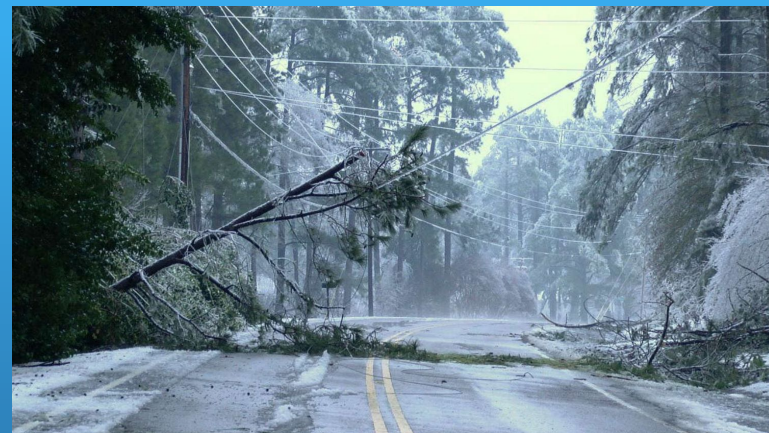




NWS Operations: Impact-Based Decision Support Services (IDSS)



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Operations Course
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Outline



Impact Based Decision Support Services

Types of IDSS

Methods of IDSS (Advantages, Challenges, Advice)

Albany WFO - State Liason Office

NWS DSS Training Plan





Who do we serve?



Our customers:

- General Public
- Media
- Academia
- Aviation Community
- Government agencies (local, state, federal)
- Emergency management





What is Impact Based Decision Support Services (IDSS)?



The overarching paradigm from which the NWS delivers weather, water, and climate-related services.

It is NOT a new paradigm as the NWS has been supporting its partners for over one and a half century.

Rather it's simply a SHIFT from the traditional product focused service to a more interpretative, hands-on, in your face consulting service/approach.

□ In essence **IDSS** is taking weather forecast, analysis, watches, and warnings and converting them into impact-based environmental information with user-defined thresholds (tailored-made for the customer).

□ IDSS is an on-demand, reliable, quantified, and comprehensible service. **Quantifying forecast certainty especially as it relates to key threshold decisions during extreme events is paramount to the success on IDSS.**





Why the shift?



The traditional product-centric approach **SUFFERS** from it having **limited ability to convey complete information or the threat of a pending event**. People are often times seeking additional information or confirmation. (Studies from social scientist and storm surveys have shown)

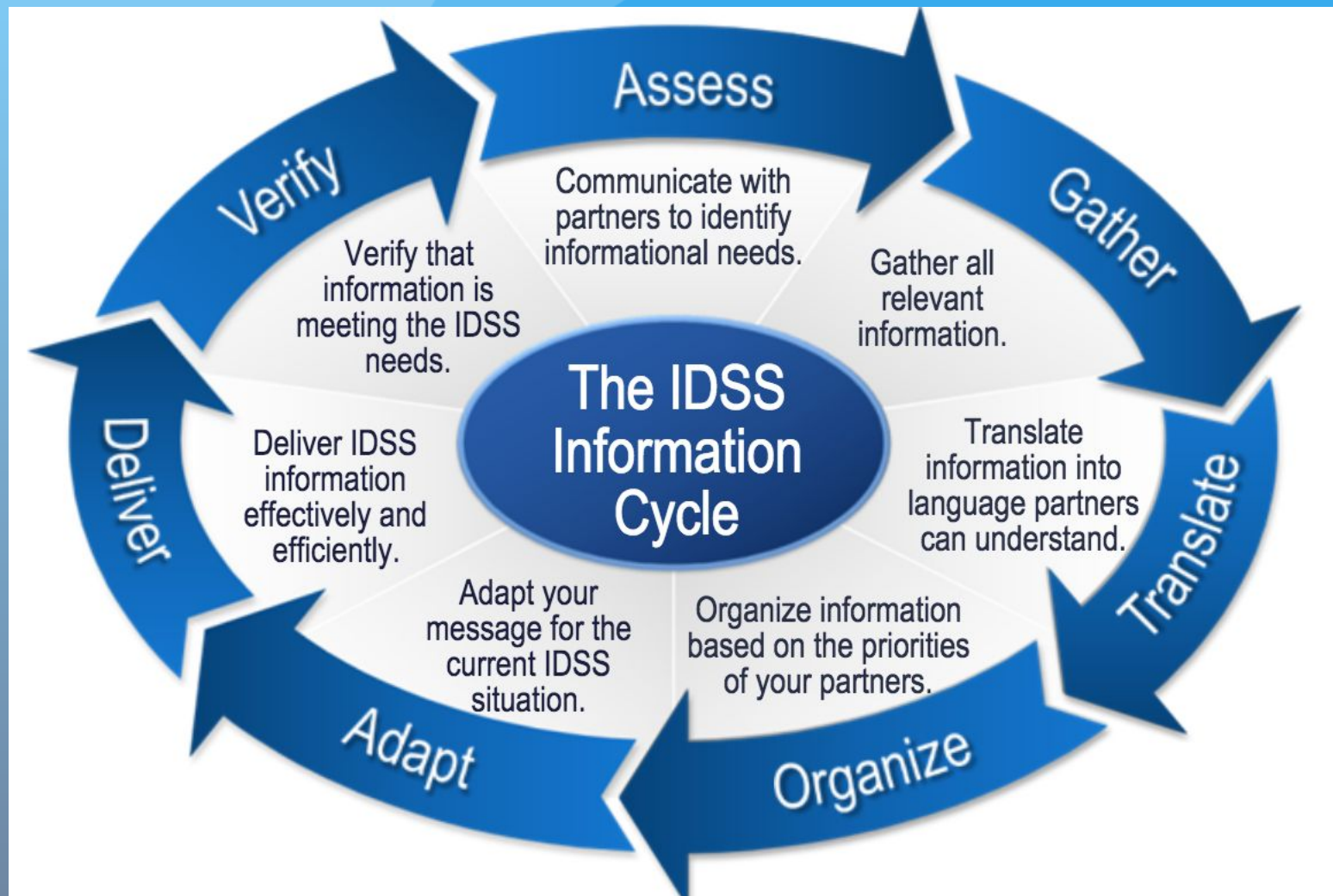
It can encompass too wide a threat window which makes it **subject to widely Varied Interpretation**.

Transformation Examples

Traditional NWS Forecast	IDSS Forecast
"60 percent chance of thunderstorms this afternoon"	"Thunderstorms between 2:00 and 4:00 pm will likely cause 30-60 minute flight delays"
"Thunderstorms will be in the response area this afternoon"	"People in the immediate area should take shelter due to the possibility of lightning from 2:00 to 4:00 pm"
"Heavy snow with accumulations of 8 to 12 inches tonight"	"I-80 will likely be impassable after midnight due to heavy snowfall"



The IDSS Information Cycle





Initial Information

What

Where

When

Length

Medium



Types of IDSS Situations

Emergency

Planned

Long-term

Changing

Types of IDSS Situations:

Emergencies

Planned Events

Long-term Events

Changing Situations



Emergency situations include...

Impending events.

Rapidly developing situations.

Events with evolving severity.



Emergency events are situations...

With high stress levels.

With high potential impact levels.

That can have a wide range of impacts.

Planned events can be...

Small-scale.

Large-scale.

Multi-scale.

The type and scale of a planned event will largely determine its characteristics including:



- Security level
- Potential impacts
- Number of involved partners
- The stress level of individuals during the event

Long-term events include...

Evolving weather events.

Recovery efforts.

Events impacted by weather.

IDSS during long-term events may...

Involve multiple partners.

Include high stress situations.

Have the potential to escalate.



Any one of these types of situations may change and evolve.

When a situation changes...

Your partners may change.

Their needs may change.

The urgency of partners' needs may change.



Be prepared to...

Transition from one type of IDSS delivery to another.

Adapt your messages according to the developing situation.

Places to provide IDSS

Where: Location

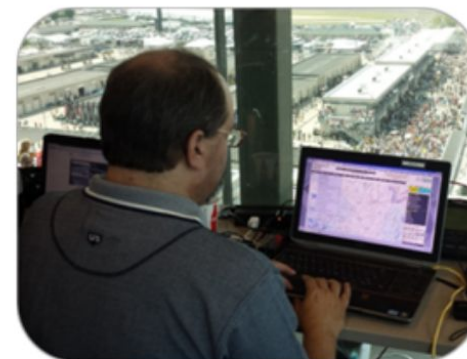
Where will you be providing IDSS support from?



The Office



**Incident
Command Post**



**Emergency
Operations Center**

What to do when you have a short notice?

When: Short Notice

When am I expected to provide support?

You may need to deliver IDSS on very short notice.

When you don't have much time to prepare...
...communication is crucial!!!





Key takeaways to apply when given a short notice



Information for Short Notice

Ask about the...

Key threshold information.

Details about the current situation.

Information delivery method preferred by your partner.

Length of your briefing period.

Medium for your briefing.



Examples of IDSS Visual Aids and Supporting Materials

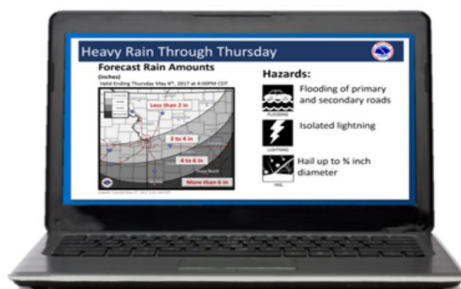
* Slides provide an immediate reference for your IDSS messages

* A situation report is a short synopsis of your presentation or briefing. Partners can access information quickly and easily.

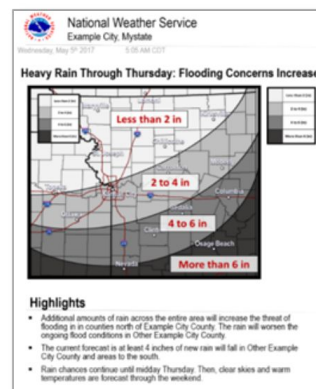
* Fact sheets may include more information than the situation report. Fact sheets can be several pages long. They are useful to our partners as reference materials.

Medium: Supporting Materials

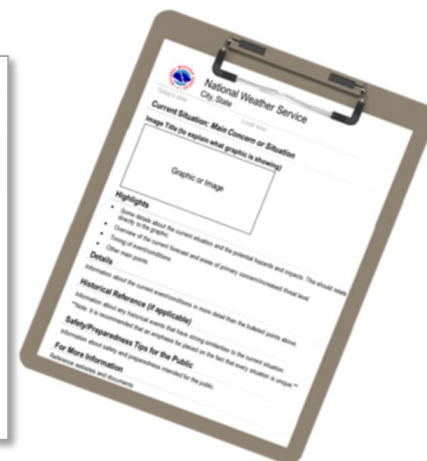
Slides



Situation Reports

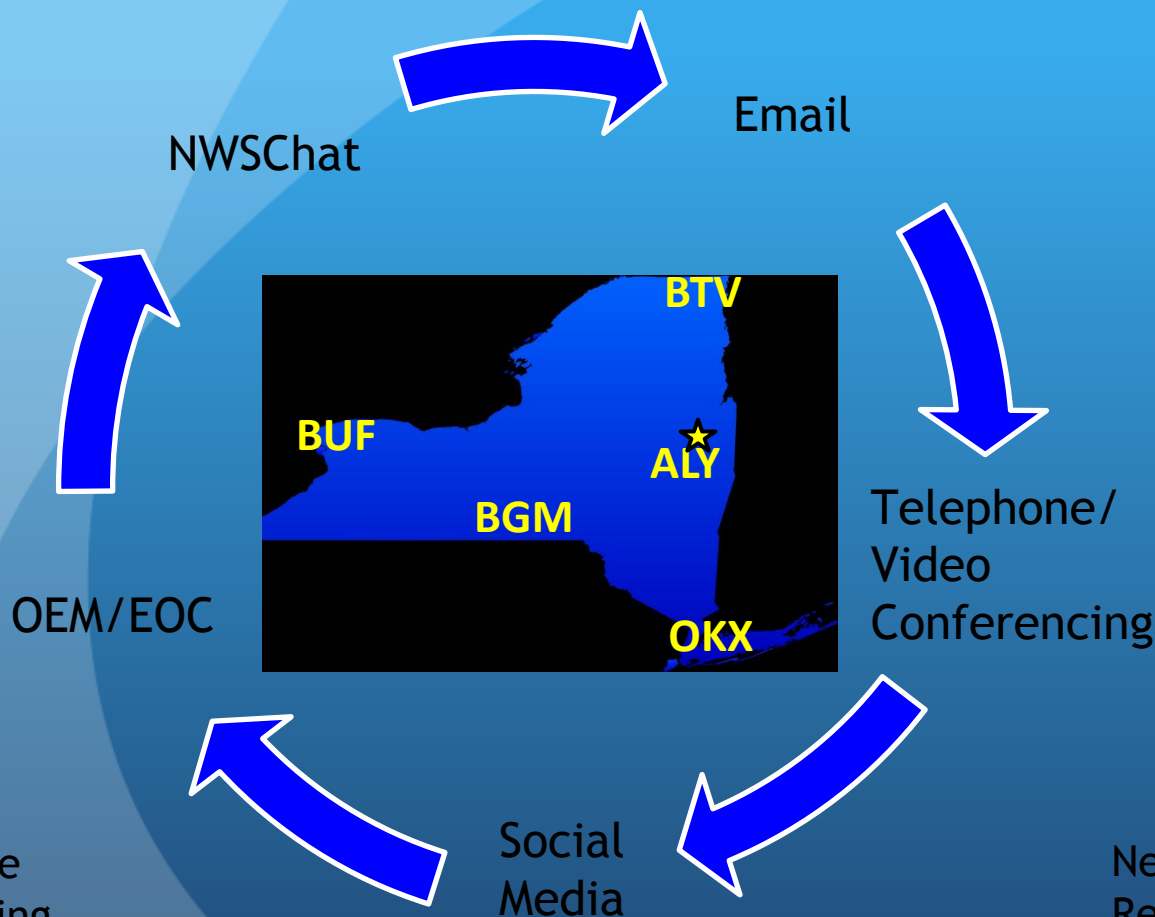


Fact Sheets



These visual aids communicates lots of information to a wide range of people.

Methods of IDSS (Communication Channels)



Coordination:

We also coordinate with our surrounding WFOs, as well as nationally with WPC, SPC, NHC (via AWIPS Collaboration Chat, Phone, Video)

Next slides discuss Remote IDSS vs. Onsite IDSS (Advantages, Disadvantages, and Tips)

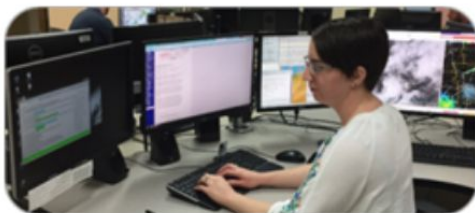
Text

Phone

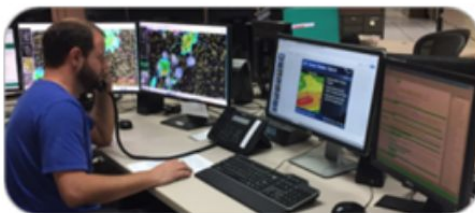
Video

Methods of Remote IDSS

During remote IDSS you will be communicating with an individual or a group of partners from your typical working environment.



Text



Phone



Video

Text-based IDSS (i.e. NWSChat)

Benefits:

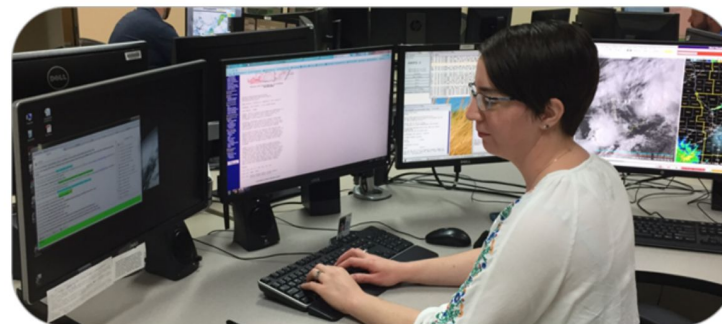
- Allows you to provide constant updates and access to IDSS

Challenges:

- Potential to be misunderstood
- Difficult to communicate severity
- Difficult to emphasize information

Tips/Advice:

- Choose your words well
- Write exactly what you mean
- Make sure you understand the question



Challenges:

Potential to be misunderstood.

Difficult to communicate severity.

Difficult to emphasize information.

Phone IDSS (one-on-one or group)

Benefits:

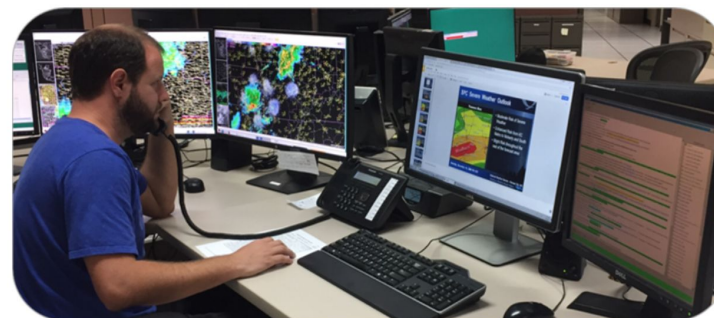
- Oldest form of IDSS and one that people may be most comfortable with

Challenges:

- Face-to-face interaction is not available
- Most often you may not be able to share visuals

Tips/Advice:

- Speak clearly and use plain language
- Solicit feedback from partners
- Make sure everyone is looking at the same image if you're able to share visuals



Challenges: **No face-to-face interaction.**



Video IDSS



Trending higher as it's becoming a more common method of IDSS
We often use this medium during coordination with national centers, other WFOs, and some of our core partners (i.e. Thruway)

Benefits:

- Closest human interaction you'll get to outside of being there in person
- Can communicate more effectively (i.e. can express/emphasize information better)
- Constant or intermittent accessibility to partners (i.e. Skype sessions)

Challenges:

- Limited experience may result in nerves

Tips/Advice:

- Practice your message
- Make eye contact with camera (put sticker or photo next to if need to help)



Challenges: Limited experience using video conferencing.
Nerves.



Presentations

One-on-One

Methods of Onsite IDSS

Onsite IDSS usually requires that you deliver your messages in multiple ways.



Presentations

Benefits:

- You know when you are expected to brief
- Ability to interact with the audience
- All modes of communication are available

Challenges:

- Nervousness



One-on-One

Benefits:

- You can adapt information
- Personal interaction with partners
- Various methods of communication based on the partners

Challenges:

- You may encounter some tough questions





Handling tough questions



Tips/Advice to tough questions:

- Take a moment
- Maintain consistency
- Don't guess.

If you can find the answer...

- Tell your partner when you can get that information to them.

If there isn't an answer...

- Communicate clearly that there is no answer to the question.
- If needed, explain why that information isn't available or doesn't exist.





Finally Verify



Steps to Verify

Summarize

Encourage
Questions

Reconfirm
Thresholds

Identify
Additional
Information
Needed

Provide
Contact
Information

Invite Feedback





Albany WFO



State Liason Office to New York

We provide support to several state agencies (i.e. NYS Watch Center) particularly in the case of significant weather.

Ex: In the case of severe weather, we may be called upon for on-site support and be deployed to NYS's OEM EOC. Here we will provide briefings/IDSS to the Incident Commander, the Governor, or his/her personnel/ reps.



**Homeland
Security &
Emergency
Services**



Ex: HYSPLIT modeled output to the NYS Dept. of Homeland Security in the case of a chemical/gas leak.



**Department of
Environmental
Conservation**



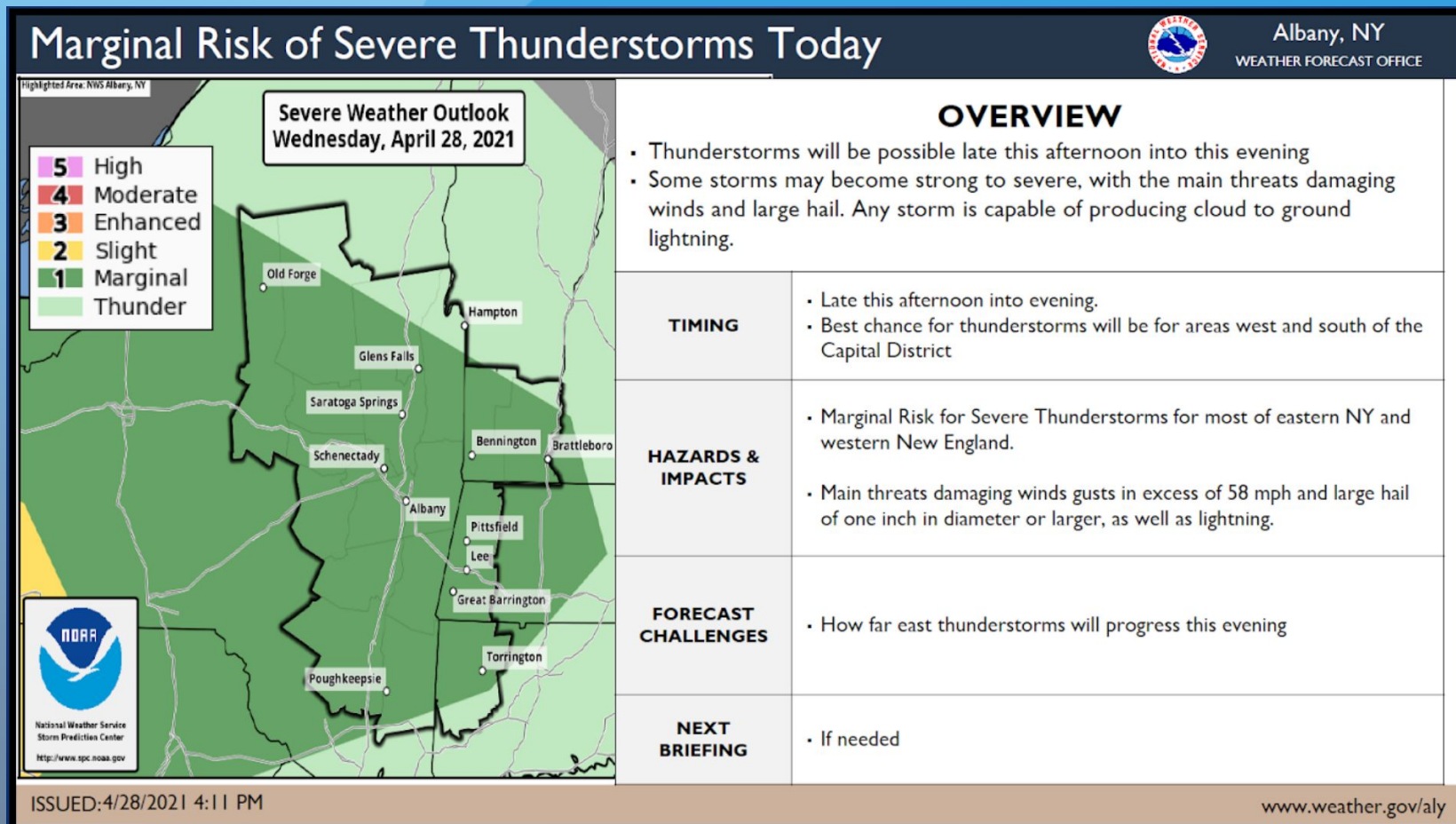


State Liason IDSS Briefing



Sample of our 1-pager briefings

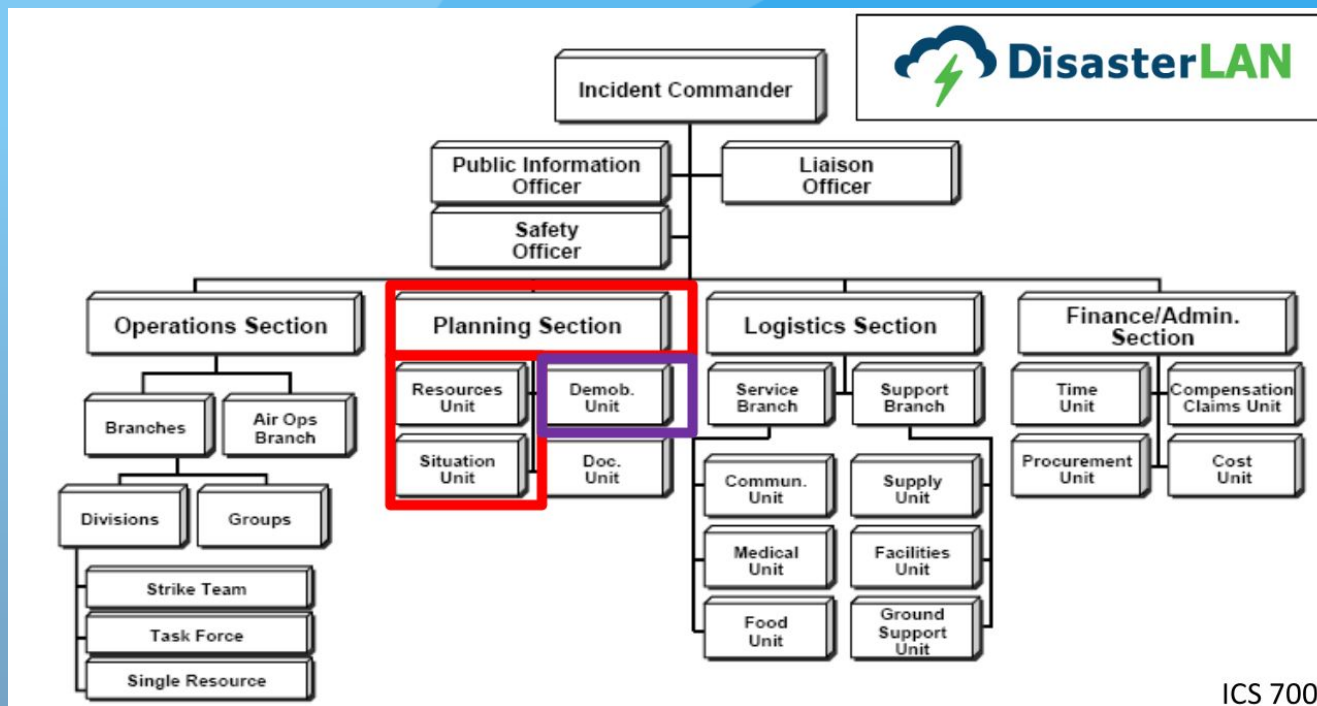
- Alternative to our full briefings in the case of weather not perceived to be too serious or if confidence is still pretty low on a potential weather event



Alb.stormreport@noaa.gov



Example of NYSOEM In-Site Support



ICS 700

For major events (partial or full activations)

Usually embedded in the **Planning Section***





Who do we serve ?

Everyone in the United States is our customer:

- citizens
- business and industry including private meteorologists
- media (TV stations, radio stations, newspapers, internet media, etc.)
- user groups such as the aviation, agricultural, transportation, marine, and recreational communities
- academia
- local, state, and federal government



Here are some examples of how we serve our customers:



- Citizens and other user groups who need weather information: Through NOAA All Hazards Weather Radio, satellite transmissions, the internet, and the broadcast media, we provide weather, hydrologic, and climate forecasts and warnings. The information is used in a wide variety of ways based on our user's needs.
- Aviation Community: Our office issues five airport terminal forecasts (Terminal Aerodrome Forecast, or TAFs) at least four times daily. The airports are located in Fayetteville, Greensboro, Raleigh-Durham, Rocky Mount and Winston-Salem.
- Academia, Business and Industry: We collect a wide variety of meteorological and hydrologic data including temperatures, precipitation, sky cover, radar data, weather balloon data, and much more and send it to the National Climatic Data Center (NCDC) for archiving. Anyone who needs weather data can request this information directly from NCDC to use in a variety of ways including atmospheric research, climate and risk calculations, disaster mitigation, and planning. We also collaborate with several universities and institutions in a variety of research studies.
- Local, State, and Federal Agencies: We not only provide routine weather, hydrologic, and climate forecasts and warnings for these agencies, but during significant storms or critical weather, we coordinate and provide detailed briefings, forecasts and warnings.





NWS DSS Training Plan






CHIEF LEARNING OFFICE TRAINING PORTAL

NOAA/ NATIONAL WEATHER SERVICE

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Local forecast by "City, St" or ZIP code

[Location Help](#)



NWS Impact-Based Decision Support Services PDS

Weather-Ready Nation is about building community resilience in the face of increasing vulnerability to extreme weather. To achieve this goal, it is imperative that the NWS expand its capacity to provide superior impact-based decision support services (IDSS) in all phases of the disaster life cycle. This Professional Development Series (PDS) focuses on identifying professional competencies needed to perform IDSS, along with an inventory of instructional components available to build those skill sets.



[Home](#) [PCU 1](#) [PCU 2](#) [PCU 3](#) [PCU 4](#) [PCU 5](#) [PCU 6](#) [PCU 7](#) [Task Book](#) [Boot Camp](#) [NWS IDSS Portal](#) [Virtual Lab](#)

Professional Competency Units (PCUs)

PCUs 1 - 3

The first three areas of professional competency have been identified as essential for proficiency in the delivery of IDSS for all operational employees. All operational employees will complete these units.

+ [List of operational employees](#)

Note: These PCUs were released in September 2017 and are available via the [Commerce Learning Center](#).





PCUs 4 - 7

The next four areas of professional competency have been identified as essential for proficiency in the delivery of on-site IDSS. These PCUs are optional - only employees wishing to attain Deployment-Ready qualification will complete these units.

Note: These PCUs were released in December 1, 2017 and are available via the [Commerce Learning Center](#).

Deployment-Ready Requirements

Those wishing to become Deployment-Ready will complete PCUs 1 - 7, and a [task book](#). They can then be signed off by their supervisor, and put in the priority list for [IDSS Deployment Boot Camp](#).


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NWS DSS Training Plan



**FEMA** | Emergency Management Institute



National Incident Management System (NIMS)

NIMS 2017 Learning Materials: This content is to provide information to emergency management practitioners on the key changes contained in the new NIMS 2017 document. Content is available at: https://training.fema.gov/nims/docs/NIMS_2017_Instructor_Student_Learning_Materials.pdf

EMI works in collaboration with the whole community to provide training in support of the NIMS Training Program. The Preparedness Branch coordinates EMI's NIMS training efforts with the National Integration Center (NIC) to integrate NIMS doctrine and training with whole community needs.

NIMS and NIMS training program information is detailed at <https://www.fema.gov/national-incident-management-system>

NIMS online course certificate contact Independent.Study@fema.dhs.gov

NIMS resident course certificate contact netcadmissions@fema.dhs.gov

[Frequently Asked Course and Training Questions](#)

NIMS Core Curriculum Courses are comprised of ICS, NIMS, and All-Hazards Position Specific (AHPs) courses detailed below:

ICS and NIMS Courses

- [ICS-100: Introduction to the Incident Command System](#)
- [ICS-200: ICS for Single Resources and Initial Action Incidents](#)
- [ICS-300: Intermediate ICS for Expanding Incidents](#)
- [ICS-400: Advanced ICS for Command and General Staff](#)
- [IS-700: National Incident Management System: An Introduction](#)
- [IS-701: NIMS Multiagency Coordination System \(MACS\)](#)
- [IS-702: NIMS Publication Information Systems](#)
- [IS-703: NIMS Resource Management](#)
- [IS-704: NIMS Communication and Information Management \(unavailable\)](#)
- [IS-706: NIMS Intrastate Mutual Aid – An Introduction](#)
- [IS-800: National Response Framework: An Introduction](#)
- [G-191: Incident Command System/ Emergency Operations Center Interface](#)
- [G-402: Incident Command System \(ICS\) Overview for Executives/Senior Officials](#)
- [G-775: Emergency Operations Center \(EOC\) Management and Operations](#)

ICS 300/400, G191, G402, and G-775 are coordinated by local Emergency Management Agencies, please contact them directly for course offerings in your area. Contact information for State or Territorial Emergency Management Agencies can be found at <https://training.fema.gov/programs/aps/stcolist.aspx>

<https://training.fema.gov/nims/>





Questions??







