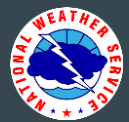




Austin Integrated Warning Team Workshop



Combined Transportation, Emergency, and Communications Center
September 26, 2019



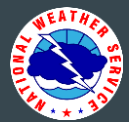
Why Are We Here?



Understanding what an Integrated Warning Team (IWT) is

Building and developing relationships within the Austin IWT

Identifying mechanisms for messaging coordination and how to handle inconsistent messaging



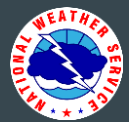
What is an Integrated Warning Team?



Term applied to agencies and individuals responsible for providing hazardous weather and water messaging



Generally includes NWS, emergency management, media, and public but expands or contracts depending on scale/scope of event



Ground Rules



Participate

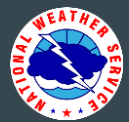
Judgment-free zone

- No accusing or blaming
- Keep comments to your jurisdiction
- Keep comments factual

Questions are encouraged

Make introductions to those you don't know

Silence electronic devices



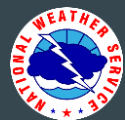
Workshop Resources

[Handout Overview](#)

[Weather Calendar](#)



**All handouts and presentations will be available at
www.weather.gov/ewx/iwt**



Agenda



Check-in & Networking *8:30 AM*

Welcome & Introduction *8:45 AM*

Presentation Session *8:55 AM*

NWSChat

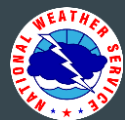
Understanding the River Forecast Process

Large Group Discussion: Impact-Based Flash Flood Warnings *9:30 AM*

Break *10:15 AM*

Small Group Discussion: *10:30 AM*
The October 2018 Llano and Colorado Floods

Final Thoughts *12:15 PM*



Acknowledgements

John Espinoza
City of San Marcos

Burton Fitzsimmons
Spectrum News

Derek Giardino
National Weather Service - West Gulf River Forecast Center

Stacy Moore-Guajardo
Lower Colorado River Authority

Scott Prinsen
Austin Flood Early Warning System

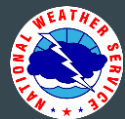
Martin Ritchey
Capital of Texas Council of Governments

Juan Ortiz
Austin Homeland Security and Emergency Management

Chikage Windler
KEYE-TV

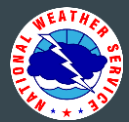


Joe Arellano
Yvette Benavides
Orlando Bermudez
Bob Fogarty
Nick Hampshire
Melissa Huffman
Mark Lenz
Jason Runyen
Monte Oaks
John Sullivan
Aaron Treadway
Paul Yura
Jon Zeitler
National Weather Service - Austin/San Antonio





Presentation Session



An Introduction to NWSChat

Jason Runyen
Senior Meteorologist
National Weather Service
Austin/San Antonio, TX



Outline

Registering for NWSChat

Who is eligible for NWSChat?

Benefits of NWSChat

Platforms to Access NWSChat

Logging into NWSChat

Live Demonstration of NWSChat Live

Best Practices and Reminders



Registering for NWSChat

1. Go to the NWSChat main page: <http://nwschat.weather.gov>
2. Click the link on the right hand side of the page that says **"Request NWSChat Account- NWS Partners"**
3. You will be directed to the account creation page. Please fill out this page entirely. The most difficult part of this page is selecting a 12-character password that you can remember.
4. Once done, scroll down and select the **San Antonio (EWX)** office for the PRIMARY office/center to approve your account request.
5. Keep scrolling and click "Create Account".



Registering for NWSChat

Who is eligible for NWSChat?

NWSChat is not open to the public. To qualify for access to join NWSChat, you must:

- Be a member of the emergency management (EM) community with a need to actively participate in discussions with NWS on imminent weather or other hazards, OR
- Be a government partner of an NWS office, OR
- Be a member of the media.



Benefits of NWSChat Messaging & Information Sharing

11:48 <KRVB-John-BexarCo-SkyWarn> ham radio reports roads closed due to high water at Classen Rd/ Briar Crest in SAT. Barracades in place but people driving around the barracades

11:49 <nwsewx-jason> Thanks again John

11:51 <nwsewx-jason> New Tornado Warning coming for Guadalupe county

11:58 <nwsewx-jason> Tornado signature passing on west side of Seguin, between Seguin and McQueeney

11:59 <media-brian.alonzo> I'm near Lake McQueeney. Wind is really roaring.

11:59 <nwsewx-jason> Message through the morning commute should be Turn Around Don't Drown.

11:59 <nwsewx-jason> Thanks Brian

12:03 <media-david.yeomans> Hwy 12 between Dripping & Hamilton Pool Rd flooded in areas.

12:05 <nwsewx-jason> Severe Thunderstorm Warning for northern Bexar and Western Comal county. Main threat straight line wind up to 60 mph.

12:08 <nwsewx-jason> Thanks David

12:12 <nwsewx-jason> 6.31" has fallen since midnight 5 miles SSW of Dripping Springs according to LCRA gauge

12:17 <media-david.yeomans> Looks like the cntr of rotation is right over your bldg? What's it like at NWS?

12:18 <nwsewx-jason> We are watching closely. New Tornado Warning out.

12:18 <nwsewx-jason> Tornado circulation passing close, but just east of NWS office

13:07 <nwsewx-jason> Appears RFD has overtaken tornadic circulation. Main threats are straight line winds headed north up I-35 between San Marcos and Kyle. Tornado Warning may be cancelled shortly.

13:09 <nwsewx-jason> Very heavy rainfall continues over Hays and Comal counties. Flash Flood Warnings continue. Continue to stress Turn Around Don't Drown.

13:11 <usaf-barry.j.ortner> 75 knots or 39 knots at KHYI?

13:13 <KRVB-John-BexarCo-SkyWarn> ham radio reports at boerne stage rd / scenic loop 5 inches of water across road. Also inside the Stage Coach Hills subdivision off of Boerne Stage rd, the low water crossing measuring gauge was showing 3 feet of water

13:13 <nwsewx-jason> We are looking into that Barry

13:14 <usaf-barry.j.ortner> Thank you.

13:16 <media-collin.myers> Those winds are still very impressive, NWS. Any ideas on gusts northeast of Martindale now?

13:19 <nwsewx-jason> 60-70 mph near Uhland, north of Martindale

13:22 <media-collin.myers> Thanks Jason

13:24 <usaf-barry.j.ortner> Tracking...thank you!

13:28 <media-david.yeomans> photog just saw a car swept away in wimberley. calling 911..

13:29 <vost-david.reimer> Via a social media group who monitors scanner traffic "Wimberley FD currently evacuating residents due to flooding. Shelter at Wimberley Community Center"

13:29 <nwsewx-jason> Thanks David

13:36 <nwsewx-jason> We are upgrading the Flash Flood Warning for Comal and Hays counties to a Flash Flood Emergency. Several high water rescues have taken place. Confirmed reports of evacuations taking place along Cypress Creek on north side of Wimberley.

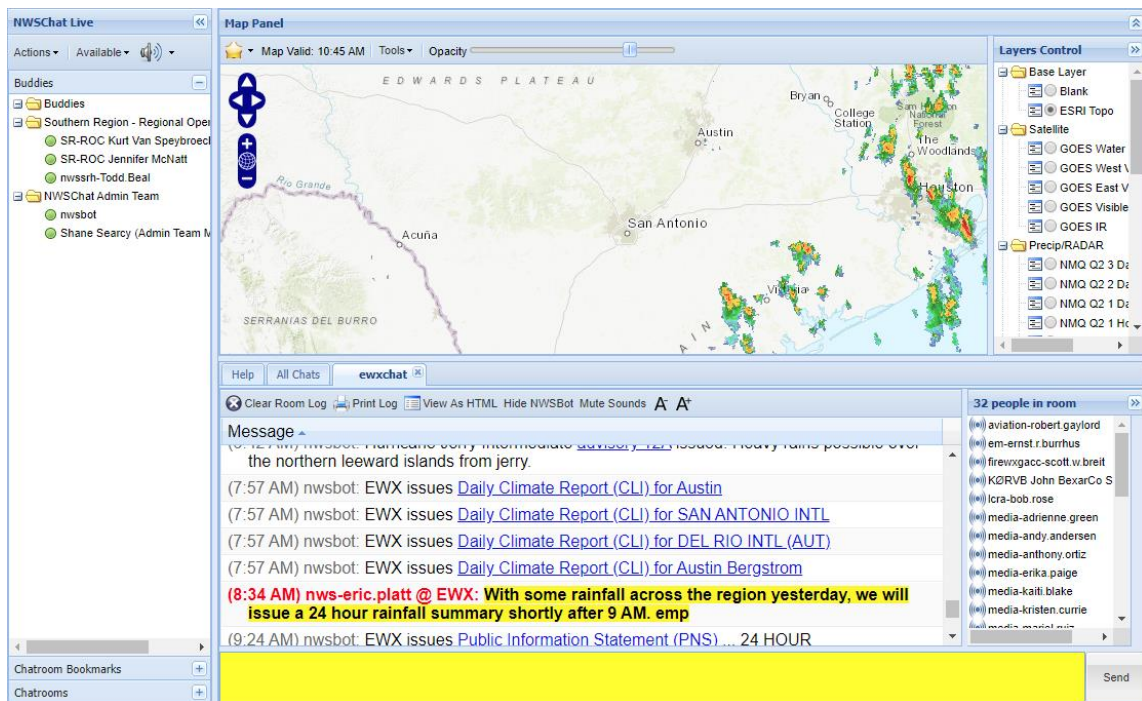
13:37 <nwsewx-jason> Several gauge reports of over 6 inches with radar estimates of isolated pockets up to 10 inches in the Flash Flood Emergency.



Platforms to Access NWSChat

NWSChat Live

- Free
- Can access from mobile phones, tablets, or PCs
 - Most stable on PCs/tablets, least stable on mobile phones
- Access through web browser, should comply with most IT requirements



Platforms to Access NWSChat

Pidgin

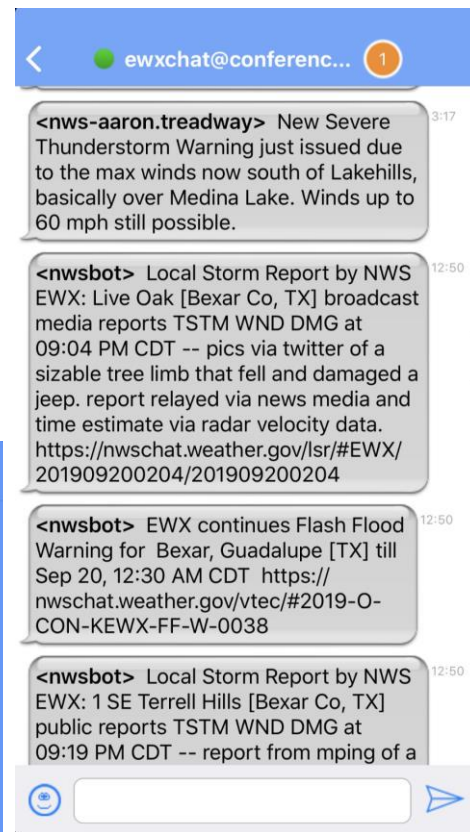
- Free
- Can only access from PC
- May need security/firewall settings to be adjusted by IT department for program to work



Platforms to Access NWSChat iPhone and Android Applications

Talkonaut

- Free
- Available through the App Store and Google Play
- Set-up video:
<https://www.youtube.com/watch?v=ftk4d6dl0fg>
 - May have issues using depending on what version of iOS you have



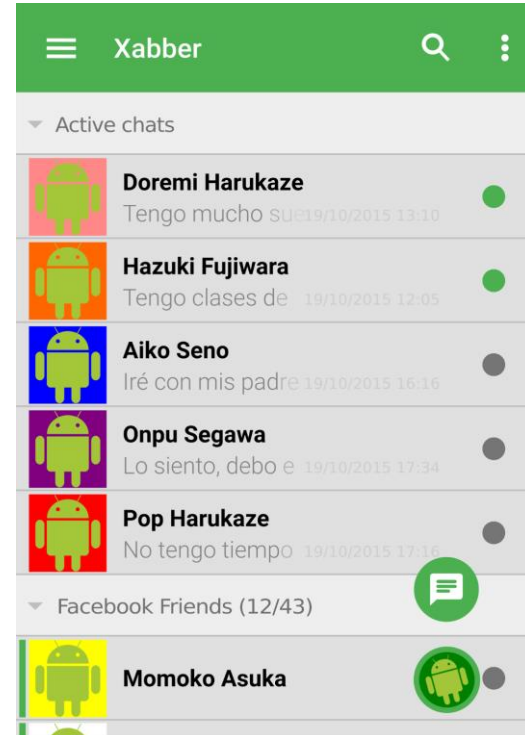
Platforms to Access NWSChat Android Applications

Xabber

- Free
- Available through Google Play

XMPP Messenger

- Free
- Available through Google Play



Platforms to Access NWSChat

Windows Mobile and BlackBerry

IM+ (Windows Mobile)

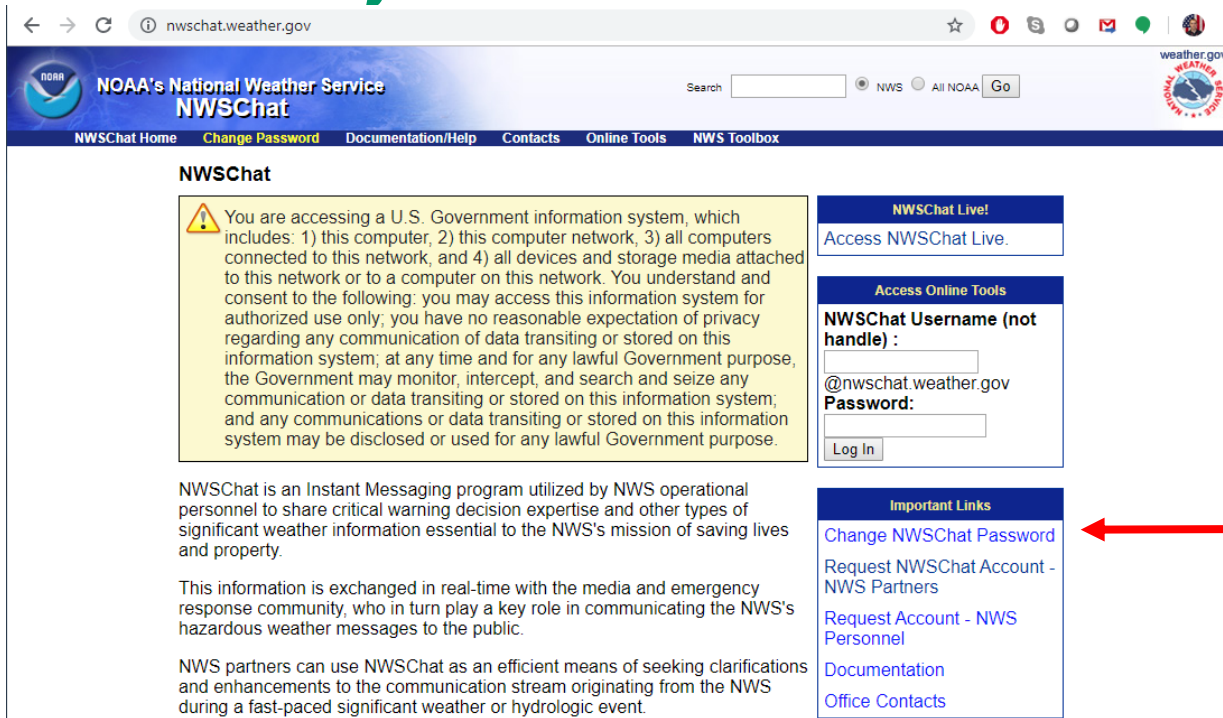
- Free
- May not comply with security requirements for government phones

Vayusphere (BlackBerry)

- Must pay for license to use (\$14.95)



Logging into NWSChat Password Recovery




Logging into NWSChat

Password Recovery: NWSChat Live

NWSChat Live Login Options

Login with Account



Username:

Password:

Welcome to NWSChat Live, please log in with your user account.

[Forgot your password?](#)

[Switch to nwsChat Live without Map](#)



Live Demonstration of NWSChat Live

The screenshot displays the NWSChat Live web application in a browser window. The address bar shows `nwschat.weather.gov/live/`. The interface includes a top navigation bar with 'Map Panel', 'Actions', and 'Available'. A 'Map Panel' dropdown menu is open, showing 'Map Valid: 12:15 PM' and 'Tools' with an 'Opacity' slider. A 'Buddies' list is on the left. A 'Layers Control' panel on the right lists various map layers: 'Base Layer' (Blank, ESRI Topo), 'Satellite' (GOES Water, GOES West V, GOES East V, GOES Visible, GOES IR), 'PrecipRADAR', and 'NMQ Q2 3 D', 'NMQ Q2 2 D'. A central world map shows North America, Europe, Asia, Africa, and the Atlantic and Pacific Oceans. A 'NWSChat Live Login Options' dialog box is centered, featuring the National Weather Service logo, a 'Login with Account' tab, and fields for 'Username: nws-jason.runyen' and 'Password: *****'. It includes 'Show Debug', 'Browser Save Login', and 'Login' buttons. Below the fields, it says 'Welcome to NWSChat Live, please log in with your user account.' and provides links for 'Forgot your password?' and 'Switch to NWSChat Live without Map'. The main content area below the map has a 'Help' button and 'All Chats' link. It is titled 'NWSChat Live Application' and lists 'Most Recent Changes' with three items: '9 Apr 2015: Google Maps replaced with ESRI Topo', '12 Jun 2014: Fix bug where warnings and local storm reports were not clickable', and '25 Feb 2014: Improve stability'. A paragraph describes NWSChat Live as a pure web browser instant messaging client. A footer note states the application is under rapid development and may contain bugs, with a link to `nwschatadmin@noaa.gov` for reporting issues. At the bottom left, there are 'Chatroom Bookmarks' and 'Chatrooms' sections. The National Weather Service logo is in the bottom right corner.

NWSChat Live

Map Panel

Actions Available

Buddies

Map Valid: 12:15 PM Tools Opacity

NWSChat Live Login Options

Login with Account

Username: nws-jason.runyen

Password: *****

Show Debug Browser Save Login Login

Welcome to NWSChat Live, please log in with your user account.

[Forgot your password?](#)

[Switch to NWSChat Live without Map](#)

NWSChat Live Application

Most Recent Changes

- 9 Apr 2015: Google Maps replaced with ESRI Topo
- 12 Jun 2014: Fix bug where warnings and local storm reports were not clickable
- 25 Feb 2014: Improve stability

"NWSChat Live" is a pure web browser instant messaging client for NWSChat. The platform runs purely over HTTPS (port 443) and without third party browser plugins, almost all users should be able to run this application without local modifications. The only requirement is for a modern web browser that supports javascript.

This application is under rapid development and may contain bugs. Please report bugs and suggestions to nwschatadmin@noaa.gov. Please be sure to mention the version and brand of web browser you use.

Audio Alert Credits

- Bleep Noise. Attribution 3.0, Recorded by Mike Koenig
- Comm. Attribution 3.0, Recorded by BuffBill84
- Door Bell. Sampling Plus 1.0, Recorded by akanimbus
- EAS Tone. Attribution 3.0, Recorded by Mike Koenig
- Elevator. Sampling Plus 1.0, Recorded by Corsica

Chatroom Bookmarks

Chatrooms

NATIONAL WEATHER SERVICE

Best Practices and Reminders: Font Background Color Recommendations

Questions or comments in NWSChat can be missed if their font color or background color does not stand out from the messages the NWSBot sends

National Weather Service Message Color

Emergency Manager Message Color

Media Message Color

All Others Message Color

Bot Message Color



Best Practices and Reminders: Desktop Platforms

Font Background Recommendations

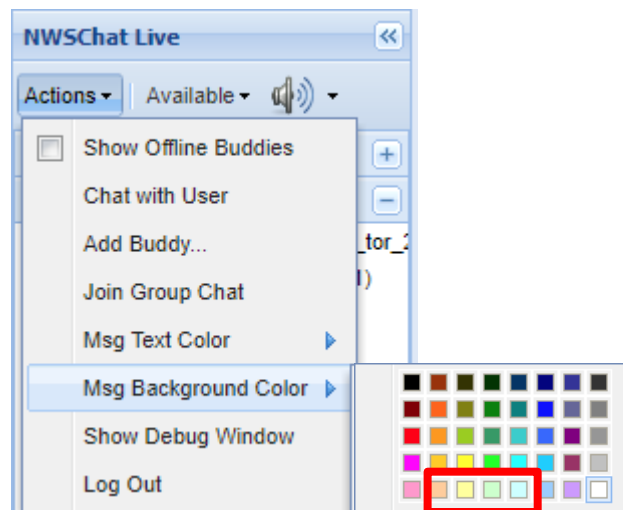
National Weather Service Message Color

Emergency Manager Message Color

Media Message Color

All Others Message Color

Bot Message Color



Best Practices and Reminders: Pidgin Font Background Recommendations

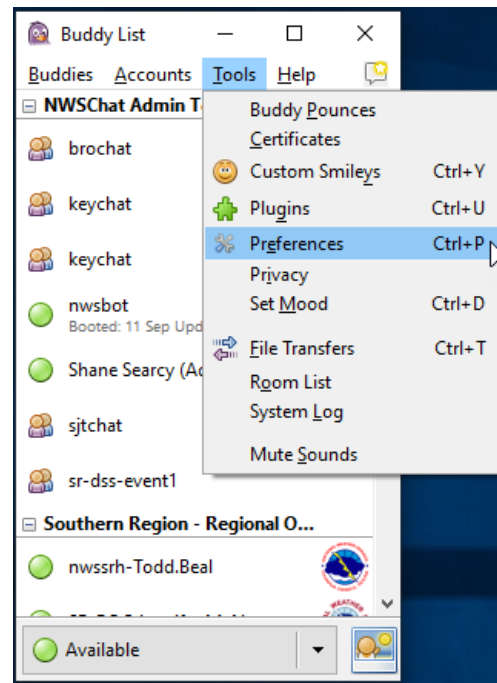
National Weather Service Message Color

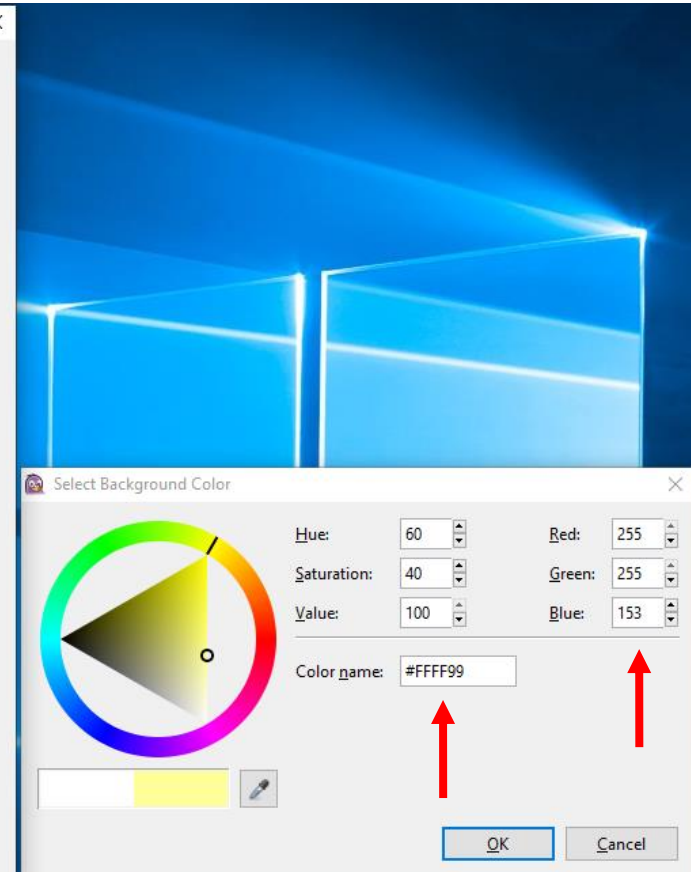
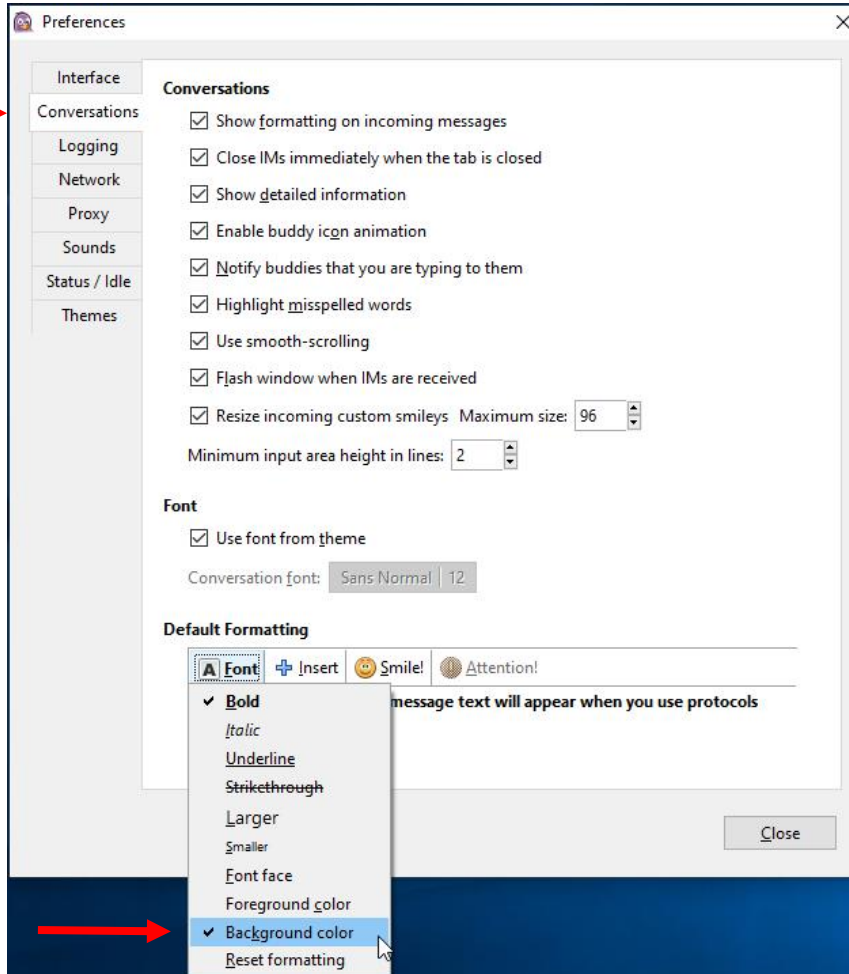
Emergency Manager Message Color

Media Message Color

All Others Message Color

Bot Message Color





Best Practices and Reminders: Font Background Recommendations

		<u>R</u>	<u>G</u>	<u>B</u>	<u>Color Name</u>
National Weather Service Message Color	→	255	255	153	#FFFF99
Emergency Manager Message Color	→	255	204	153	#FFCC99
Media Message Color	→	204	255	255	#CCFFFF
All Others Message Color	→	204	255	204	#CCFFCC
Bot Message Color	→	255	255	255	#FFFFFF



Best Practices and Reminders

Passwords Must Be Changed Every 180 Days

From: **NWSChat Admin Team** <nwschatadmin@noaa.gov>
Date: Sun, Apr 30, 2017 at 7:12 AM
Subject: [Status] NWSChat Account Disabled - nws-melissa.huffman
To: nwschathgx@noaa.gov

The following NWSChat user has not completed their 180 day password change requirement and has been locked out of the system:

username: nws-melissa.huffman
name: nwshgx-forecasterr-huffman
email melissa.huffman@noaa.gov
affiliation: NWS-NOAA

The user has been notified by email of this action as well.

NWSChat Admin Team



Questions?



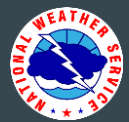
Understanding the River Forecast Process

Derek Giardino

Senior Hydrologist
National Weather Service
West Gulf River Forecast Center

Mark Lenz

Senior Hydrologist
National Weather Service
Austin/San Antonio, TX

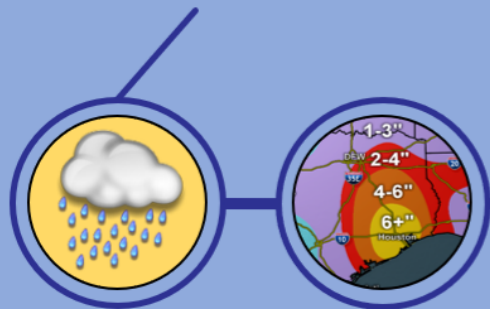


What Goes into a River Flood Warning?

Precipitation Analysis

1. Observed Rainfall

Collect, analyze, and quality control hourly blended rainfall data as input for the river model



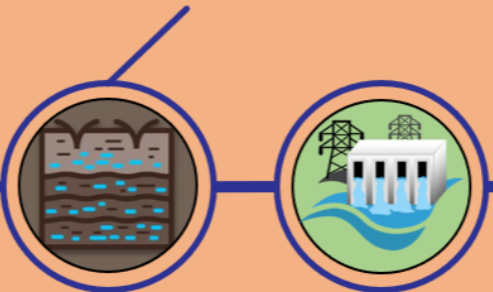
2. Forecast Rainfall

Utilizing blended weather models, forecasters estimate 6 hourly blocks of forecast rainfall as input for the river model

Hydrologic Modeling

3. Soil Moisture

Model analyzes how much of the provided precipitation analysis is absorbed and runs off into local creeks, streams, bayous, and rivers



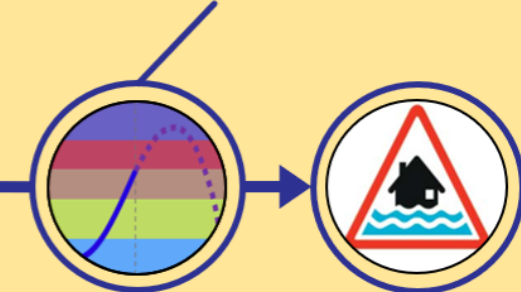
4. Reservoir Operations

Coordination with organizations controlling water from lakes is incorporated into the river model analysis

Decision Support

5. River Forecast

Forecasters evaluate model output and make modifications based on local knowledge before releasing the official forecast



6. Flood Warning

Weather Forecast Offices receive the river forecast and create flood warnings and other products for potentially impacted areas

River Forecast Timeline



Operational Hours

Standard Operations

6:00am – 10:00pm

No updates between 10pm and 6am

Extended Operations

When rainfall conditions warrant monitoring between 10pm – 6am the river forecast center will extend hours and perform updates during this time

Observed Rainfall

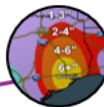
6:30am (Every Hour)



Ingest hourly radar rainfall estimations and gage accumulations and create an hourly rainfall estimate for the river model

Rainfall Forecast

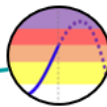
7:15am (Every 6 Hours)



Process national rainfall forecast from the Weather Prediction Center, make local adjustments and send to river model

Official Forecast Package

8:00 - 9:00am (Every 6 Hours)



Using rainfall data create official forecast hydrograph for points exceeding flood criteria and for select points which forecasts are made daily.

River Flood Warning

9:15am (5-15 minutes After Official Forecast)



River forecast is transmitted to Weather Forecast Office who reviews the hydrograph and transmits the appropriate product (statement, advisory, warning)

Decision Support Products

11:00am (Daily)



Briefings, graphics, and other supporting material to translate the river forecast into a format for people to make educated decisions for flood hazards

Monitor River Forecasts

All Day



Stream gage and rain information updates through out the day, and forecasts are monitored and updated whenever necessary at any time of the day.

Repeat Process

1:00pm (Every 6 Hours)

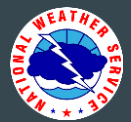


Start back with updating the rainfall forecast and continue through the process





Large Group Discussion





IMPACT BASED FLASH FLOOD WARNINGS

Aaron Treadway
Meteorologist
National Weather Service Austin/San Antonio

The What, When, and Why?

- The What:
 - Bulleted format (easy to read, descriptive, provides source info, highlights impacts)
 - Goal is to reduce the frequency of WEA messages
- The When:
 - Beta testing (including our office) ongoing, completed by late November 2019.
 - WEA changes is Jan/Feb of 2020, schedule not set in stone
- The Why:
 - Improve public response to Flash Flood Warnings
 - WEA alerts only for flash flooding events that request immediate life-saving action.



BULLETIN - EAS ACTIVATION REQUESTED
Tornado Warning
National Weather Service Austin/San Antonio TX
833 AM CDT Fri May 3 2019

The National Weather Service in Austin San Antonio has issued a

* Tornado Warning for...
Central Fayette County in south central Texas...

* Until 900 AM CDT.

* At 833 AM CDT, a severe thunderstorm capable of producing a tornado was located near Muldoon, or 10 miles northeast of Flatonia, moving north at 20 mph.

HAZARD...Tornado.

SOURCE...Radar indicated rotation.

IMPACT...Flying debris will be dangerous to those caught without shelter. Mobile homes will be damaged or destroyed. Damage to roofs, windows, and vehicles will occur. Tree damage is likely.

* Locations impacted include...
O'Quinn.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

TAKE COVER NOW! Move to a basement or an interior room on the lowest floor of a sturdy building. Avoid windows. If you are outdoors, in a mobile home, or in a vehicle, move to the closest substantial shelter and protect yourself from flying debris.

&&

LAT...LON 2977 9698 2977 9704 2993 9706 2993 9693
TIME...MOT...LOC 1333Z 185DEG 16KT 2981 9701

TORNADO...RADAR INDICATED
HAIL...0.00IN

\$\$

BMW

Format Change Already Implemented for SVR → and ← TOR Warnings

TAGS

TAGS

BULLETIN - IMMEDIATE BROADCAST REQUESTED
Severe Thunderstorm Warning
National Weather Service Austin/San Antonio TX
556 PM CDT Tue May 7 2019

The National Weather Service in Austin San Antonio has issued a

* Severe Thunderstorm Warning for...
Southeastern Williamson County in south central Texas...
East central Travis County in south central Texas...
North central Bastrop County in south central Texas...
Northwestern Lee County in south central Texas...

* Until 700 PM CDT.

* At 555 PM CDT, a severe thunderstorm was located near Camp Swift, or 7 miles north of Bastrop, moving north at 15 mph.

HAZARD...60 mph wind gusts and quarter size hail.

SOURCE...Radar indicated.

IMPACT...Hail damage to vehicles is expected. Expect wind damage to roofs, siding, and trees.

* Locations impacted include...
Elgin, Camp Swift, Coupland, Circle D-KC Estates, Knobb Springs, Rices Crossing, McDade, Butler, Cedar Hills and Phelan.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a building.

Large hail, damaging winds, and continuous cloud to ground lightning are occurring with this storm. Move indoors immediately. Lightning is one of nature's leading killers. Remember, if you can hear thunder, you are close enough to be struck by lightning.



Torrential rainfall is occurring with this storm, and may lead to flash flooding. Do not drive your vehicle through flooded roadways.

&&

LAT...LON 3047 9716 3046 9715 3015 9722 3015 9746
3050 9748 3051 9718
TIME...MOT...LOC 2255Z 183DEG 15KT 3022 9734

HAIL...1.00IN
WIND...60MPH

Flash Flood Damage Threat Tags

Flash Flood Damage Threat Tag		Explanation
"Base" (No Tag)		Use most of the time, when flash flood impact damage is possible.
FLASH FLOOD DAMAGE THREAT... CONSIDERABLE*	 WIRELESS EMERGENCY ALERTS	Use rarely, when there are indications flash flooding capable of unusual severity of impact is imminent or ongoing and urgent action is needed to protect lives and property.
FLASH FLOOD DAMAGE THREAT... CATASTROPHIC*+	 WIRELESS EMERGENCY ALERTS	Use exceedingly rarely, when a flash flood threat to life and catastrophic damage is occurring or is imminent, and floodwaters have risen or will rise to levels rarely if ever seen.

* Category utilized for a Wireless Emergency Alert (WEA).

+ Catastrophic equates to a headline and additional language for a "Flash Flood Emergency".

- Upgraded warnings to Catastrophic Tag (Flash Flood Emergency) will be brand new warnings.
 - Ensures a WEA alert, focus on smaller area with most dire impacts.
- The reduction in WEA is aimed at lower end events.
 - Higher end events with considerable/catastrophic flooding will still mean numerous WEA messages.

Flash Flooding Source Information

Flash Flooding Source Information Tag	Explanation
FLASH FLOOD... RADAR INDICATED	Evidence on radar and near storm environment is supportive, but no confirmation.
FLASH FLOOD... OBSERVED	Flash flood impacts confirmed by trained spotters, law enforcement, media, other credible human observers, etc.

- **“Radar Indicated”**: Based off Radar, no ground truth yet, anticipating future impacts
- **“Observed”**: YOUR reports, reports from spotters, rain gauge rain totals.

Flash Flooding Causative Event Tags

Flash Flooding Causative Event Tag	Explanation
EXPECTED RAINFALL... [##-## INCHES PER HOUR] [##-## INCHES IN ## MINUTES] [## INCHES IN ## MINUTES]	Use to identify rainfall rate leading to potential or observed flash flooding, including rain falling on a burn scar.
[DAM or LEVEE] FAILURE... [IMMINENT or OCCURRING]	Use to provide additional information about the status of the failing dam or levee, whether it is "imminent" or "occurring".

- **“Expected Rainfall”:** Most Common Tag (Observed or forecast rainfall rates)
 - Information used to be buried in the body of the warning text
 - Easier to find! At the bottom of the warning for Media and Emergency Managers

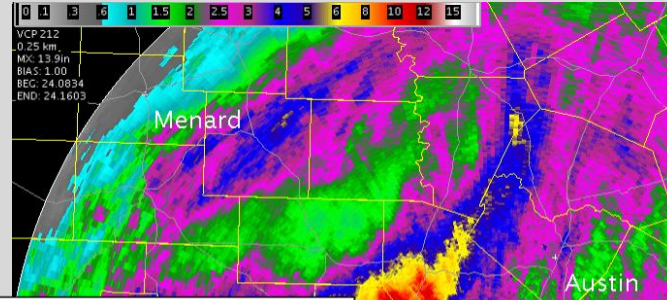
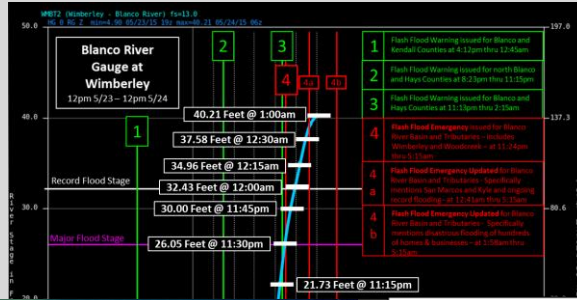
Impacts to the Integrated Warning Team

What is a
Base Flash Flood
vs.
Considerable Flash Flood
vs.
Catastrophic Flash Flood
in Central Texas?



WIRELESS
EMERGENCY
ALERTS

Example #1 – Catastrophic Flooding



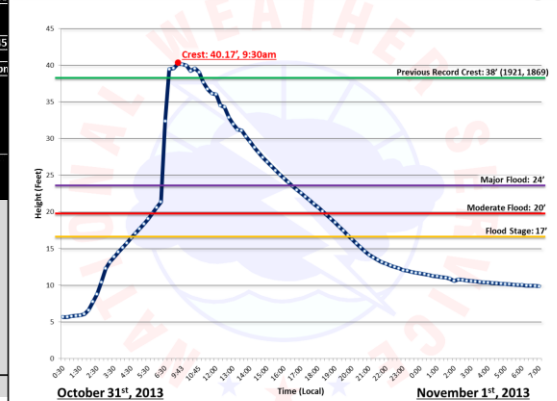
Blaine Beckman
@blaineCWH

[Follow](#)

@KENS5 @News4SA @NWSSanAntonio
houses under water in blanco, tx



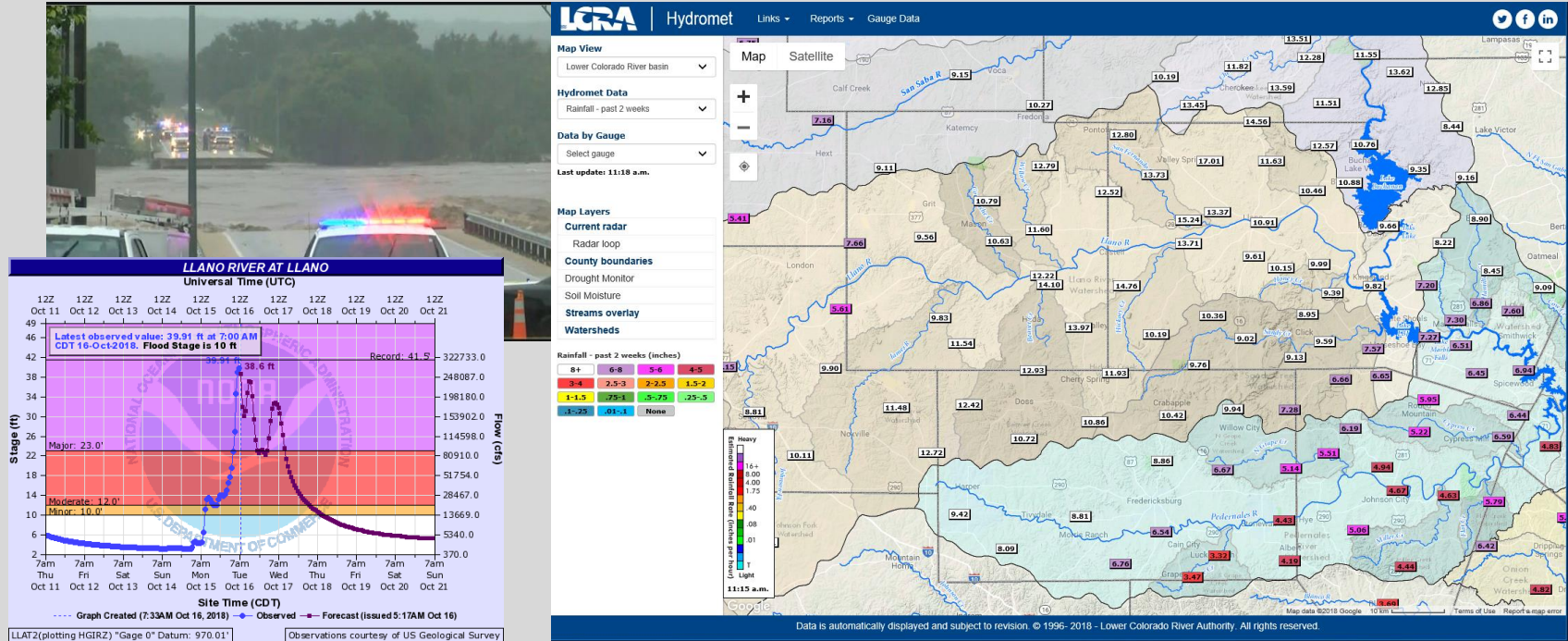
Onion Creek @ HWY 183 - ATIT2 - River Gauge





WIRELESS
EMERGENCY
ALERTS

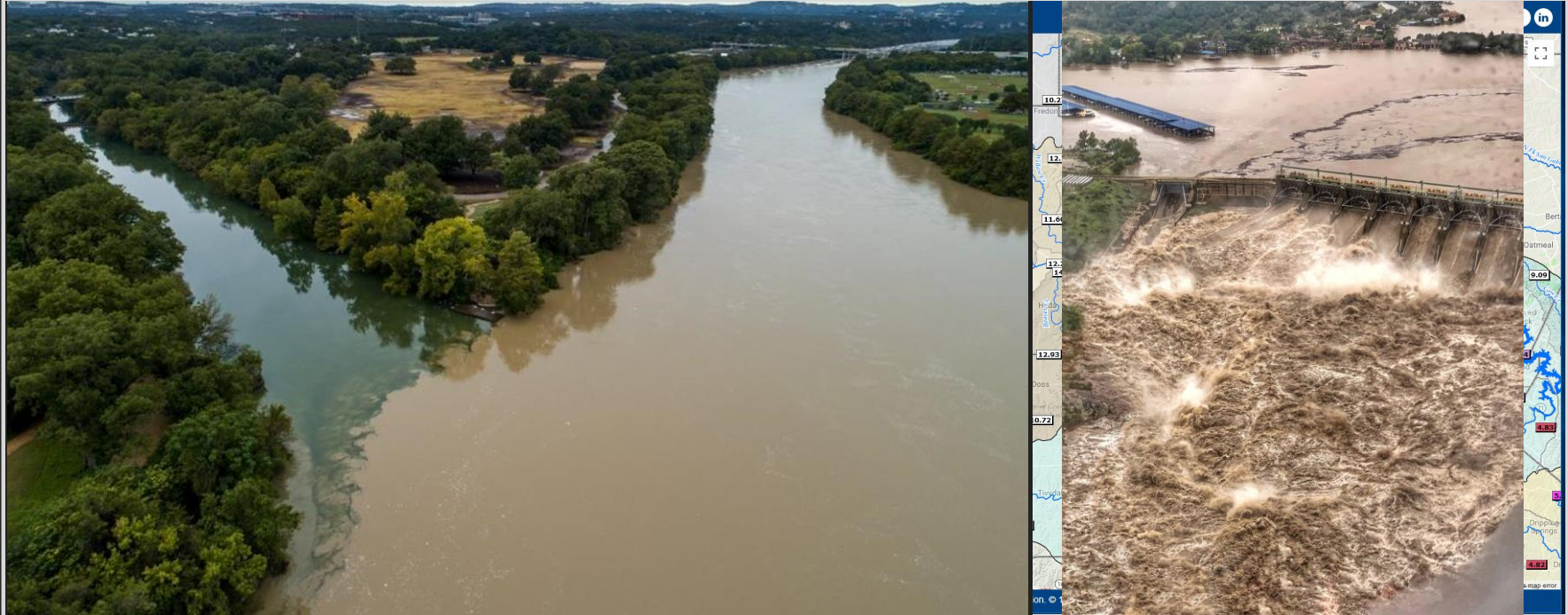
Example #2 – Considerable Flooding





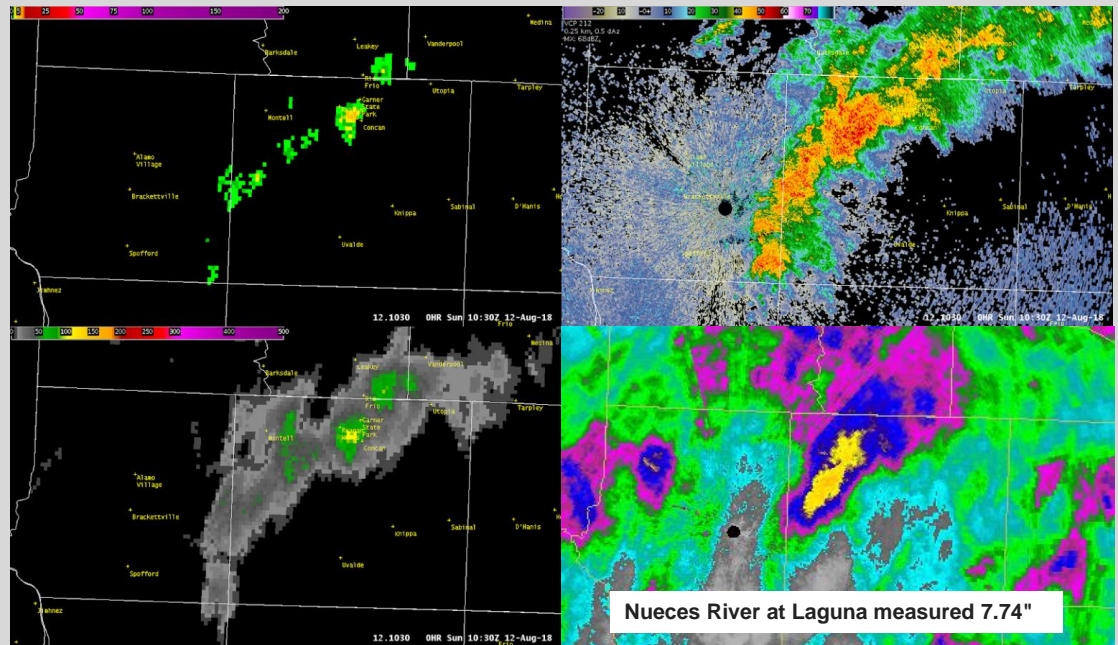
WIRELESS
EMERGENCY
ALERTS

Example #2 – Considerable Flooding



Example #3 – Base Flooding?

- **655 AM** - First Flash Flood Warning
(2-3 in radar estimates with a nearly stationary storm)
- **737 AM** – Statement Ups Wording
(3-5 in radar estimates)
- **754 AM** – River Flood Warning for Nueces (river rose 12 feet into Mod Flood)
- **800 AM** – Uvalde Co. Sheriff Calls
(65 min lead time)
- **810 AM** – Uvalde Co EM Briefing
- **830 AM** – Flood Wave at Campground
(95 min lead time)
- **831 AM** – Warning Statement Updated
(5-8 in radar estimates)



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When flash flood alerts sounded early Sunday, Samantha Winn, a Chalk Bluff park manager, woke her children and rallied her staff to warn hundreds of camp visitors about the rising river.

“When you have a flash flood, it happens like that,” she exclaimed with the snap of her fingers.



NWS Austin/San Antonio @NWSSanAntonio · 9h

Here's a comparison of what the Nueces River at the 19 Mile Bridge on Highway 55 in Uvalde County looks like normally vs. what it looks like right now after up to 8 inches of rain has fallen in the area. Photo courtesy of Lonnie Davenport.



22 311 570

1) The Chalk Bluff River Resort has been there a long time, since the 1920s I believe. The new owners took over about 4 years ago. The WEA message was received on their cell phones with the initial FFW. Workers got up and started preparing for high water. They do not have campers down by the River, all cabins and camp sites are much further up the river bank and normally out of danger.

3) The nearby upstream campsite called CountryBoy Ranch Resort (upstream by about 100 yards) was not available to answer questions, gates were closed. It was told to us that the trapped campers came from that resort. Chalk Bluff did not have any trapped campers. It would take only about a foot or two foot rise in the river to trap people on the bank or the one small island there. Believe that is what happened.

Flash flood catches Uvalde campers off guard; 27 rescued

By Jacob Beltran and John MacCormack | August 12, 2018 | Updated: August 13, 2018 8:09am



Photo: Jacob Beltran/San Antonio Express-News

Impacts to the Integrated Warning Team

What is a
Base Flash Flood
vs.
Considerable Flash Flood
vs.
Catastrophic Flash Flood
in Central Texas?

To **WEA** or Not to **WEA**?



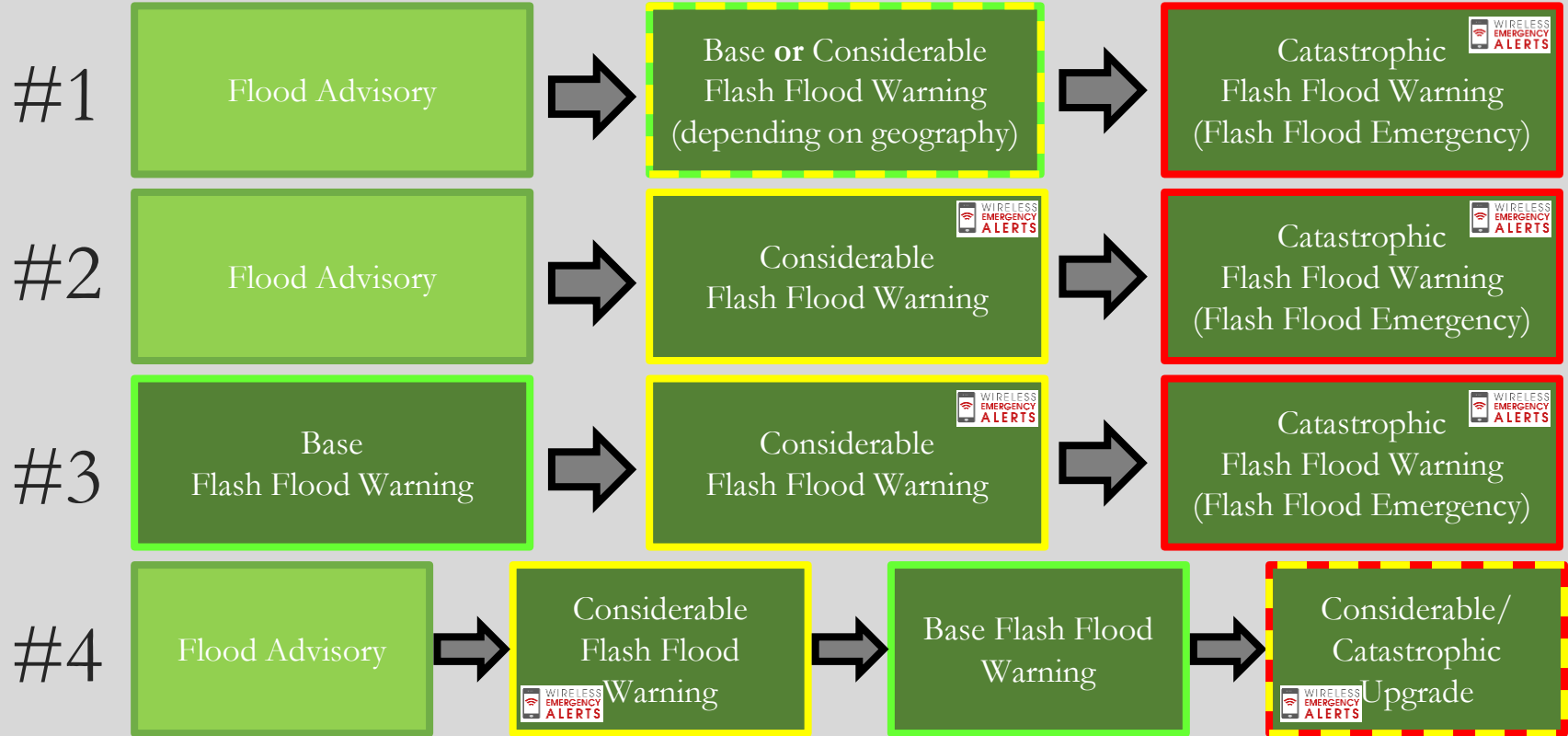
WIRELESS
**EMERGENCY
ALERTS**

(Base Flash Flood Warnings
will not be WEA-ed anymore)

Outcomes of the loss of Base Warning WEA

- Public perception is that the NWS puts out too many Flash Flood Warnings. Large number of complaints of nighttime WEA messages.
- All Flash Flood Warnings (no matter the tag!) will still be disseminated to weather.gov, NOAA Weather Radio, and the Emergency Alert System.
- WEAs will be sent for Flash Flood Statements which exhibit an increase in damage tag (upgrading from a Base tag to a 'Considerable' tag)
- Reminder: Our big flood events here will still lead to numerous WEA message, still the possibility of complaints about over alerting.

Summary of Ideas



Final Thoughts

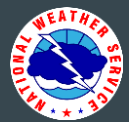
- **This first year of Impact Based Flash Flood Warnings will be a learning experience for all of us, and will also be very subjective.**
- **As we all learn together we will need reports from the field more than ever! Please let us know when the flooding begins to get out of hand.**
 - **The best ways to let us know is either through NWSChat, our social media channels, or by picking up the phone.**
- **The ground truth reports will help us calibrate what tags are needed for various events based on how much rain falls, where it falls, and the experienced impacts.**
- **How do our floods that are more river focused rather than more widespread/urban/rural flooding fit into the new tag paradigm?**

Resources

- **Weather Ready Nation Fact Sheet:** <https://weather.gov/media/wrn/FFW-IBW-factsheet.pdf...>
- **NWS Service Change Notice:** https://weather.gov/media/notification/scn19-60ibw_flashfloods.pdf...
- **Product Description Document:**
https://nws.weather.gov/products/PDD/IBWforFlashFloods_2019.pdf



Break Time





Small Group Discussions

2018 Llano and Colorado Floods

Small Group Discussions

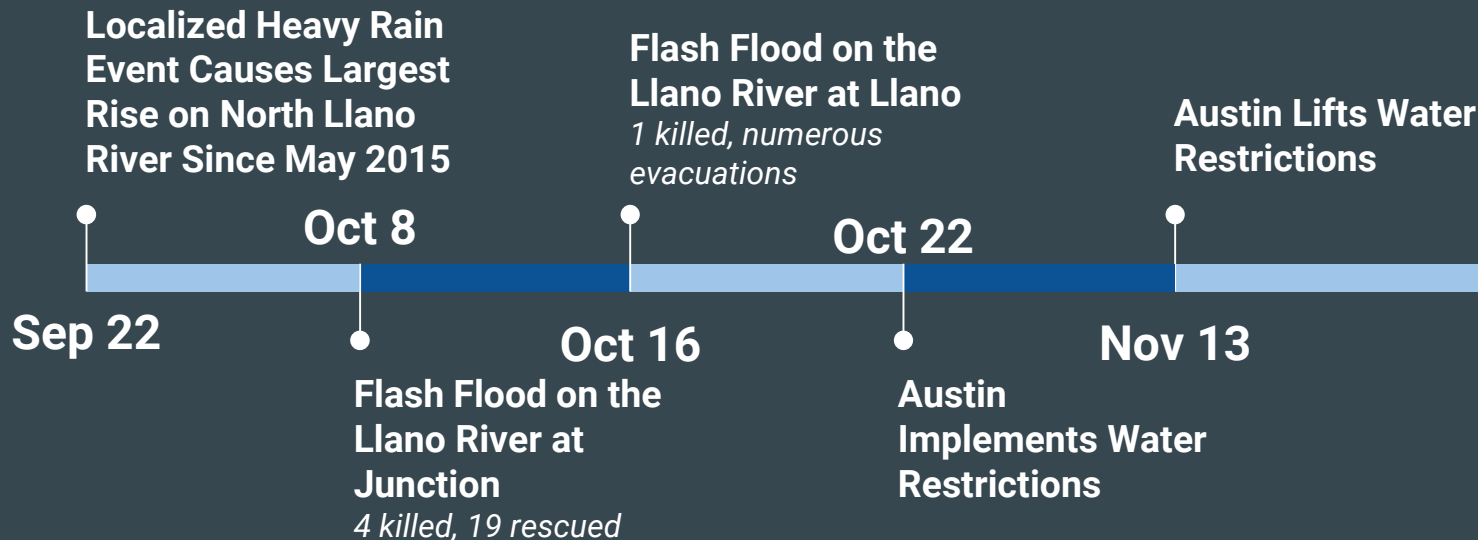


Your assigned table is your group for the final section of the workshop

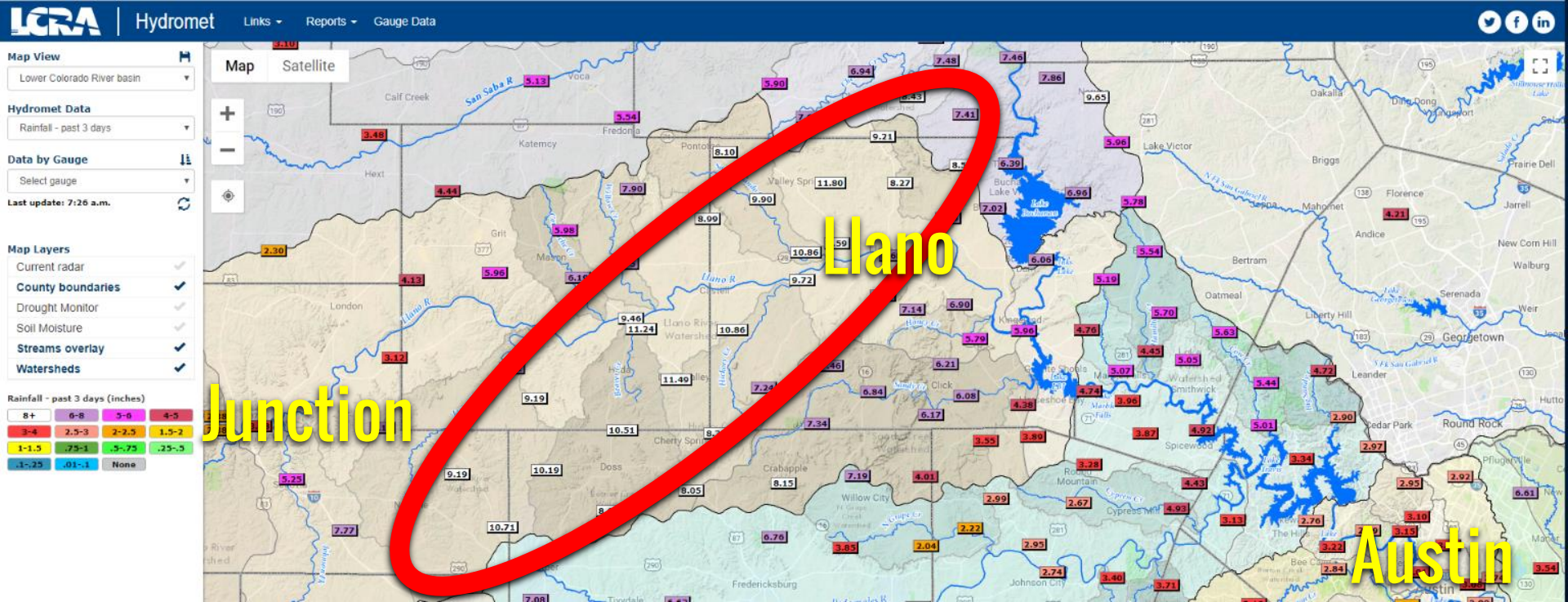
Table moderators will introduce themselves shortly

If you do not have experience with this event, participate in discussion by providing insight on how your jurisdiction would handle it

Setting the Stage



Setting the Stage



Group Introductions



Name

Position and Organization

Brief description of role during Llano/Colorado flooding (if any)

Once introductions are complete, table moderators need to identify a scribe

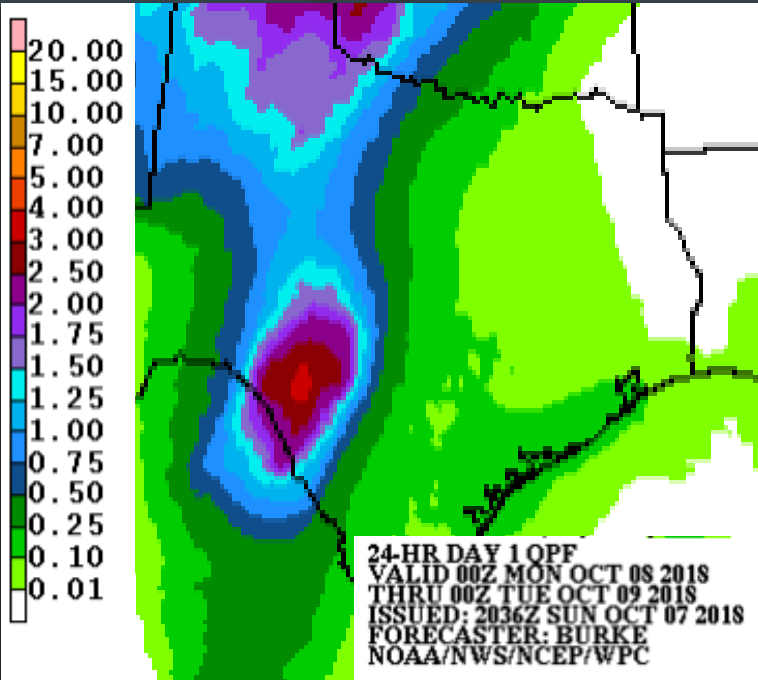
Each group will need to identify one takeaway from each slide

Event Anticipation

Messaging Rainfall



River Flood Warnings & Downstream Triggers



[17] <media-david.yeomans@nwschat.weather.gov/Home> Morning, all.
Any river flood forecast planned for Llano River downstream of Junction (Llano, etc.)?

<nws-brett.williams@nwschat.weather.gov/NWSChatLive_140.90.75.204_121736>
Hey David. We are waiting for the forecast to come in from West Gulf RFC. Just as an FYI, there hasn't been any response yet at the gauge on the Llano River southeast of Mason

Forecast Deviations

Communicating Severity



[09:46:58] <media-david.yeomans@nwschat.weather.gov/Home> Question: seems to be a disconnect in severity of this situation. "disastrous flooding" of homes/business in NWS warning.... but no planned evacs, per our newsroom talking to Llano Co. officials. Can you help me understand?

[07:54:53]

<em-ron.anderson@nwschat.weather.gov/NWSChatLive_47.183.161.207_225145>

Good morning, every way I look at the situation I see huge amounts of water coming from all directions into both the Llano River and Sandy Creek near LBJ. The river from Castell to Llano and even down to Kingsland should be able to handle 25-28' without major impact however is letting out into San Antonio (increasing) from the creek AND concern me. Any hydrologists y communities? I am feeling the people. I'm just not certain what way followed by still more water am? Is there a higher level of risk already been done by NWS? Y

BULLETIN - EAS ACTIVATION REQUESTED

CIVIL EMERGENCY MESSAGE

MARBLE FALLS EMERGENCY MANAGEMENT

RELAYED BY NATIONAL WEATHER SERVICE AUSTIN/SAN ANTONIO TX

929 AM CDT TUE OCT 16 2018

THE FOLLOWING MESSAGE IS TRANSMITTED AT THE REQUEST OF THE MARBLE FALLS EMERGENCY MANAGEMENT.

FOR RESIDENTS NEAR MARBLE FALLS...IF YOU HAVE NOT EVACUATED, DO SO NOW IN THE FOLLOWING LOCATIONS:

LIVE OAK, LAKESHORE DRIVE, PECAN CIRCLE, BACKBONE, BARRIER LANE, LOUISE, EDITH, SOUTH AVENUE J, 2147 WEST INCLUDING WATERSIDE AND RV PARK.

SHELTERS ARE LOCATED AT MEADOWLAKES CITY HALL AND MARBLE FALLS MIDDLE SCHOOL.

Civil Emergency Messages

Rapid Onset Rises



Cascading Effects

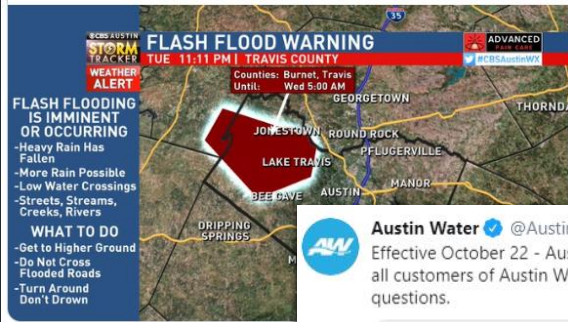
Downstream Impacts



FLASH FLOOD WARNING issued for areas in Burnet and Travis Counties around Lake Travis until 5am. The lake is at MODERATE flood stage and rising. Please evacuate if asked to do so and seek higher ground in flood prone spots like Graveyard Point.



Chikage Windler WX @ChikageWeather · Oct 16, 2018
#CBSAustinWX ALERT: FLASH FLOOD WARNING for parts of Travis County.
@cbsaustin bit.ly/cbsaustinxrad... Turn Around Don't Drown. #atwxw



Effective October 22 - Austin Water has issued a city-wide boil water notice for all customers of Austin Water. See below for answers to frequently asked questions.



Long-Duration Messages and Fatigue



Putting It All Together

Each group will reveal their biggest lessons learned or action items identified from their discussions

Notes will be collected, compiled, and distributed to attendees following the workshop



Final Thoughts and Going Forward



Today is only the start of an ongoing conversation

Members of the IWT need to communicate with each other to ensure message consistency

Consistent messages are critical for effective public response

Post-workshop survey and call for continuing education certificates sent by October 3

