

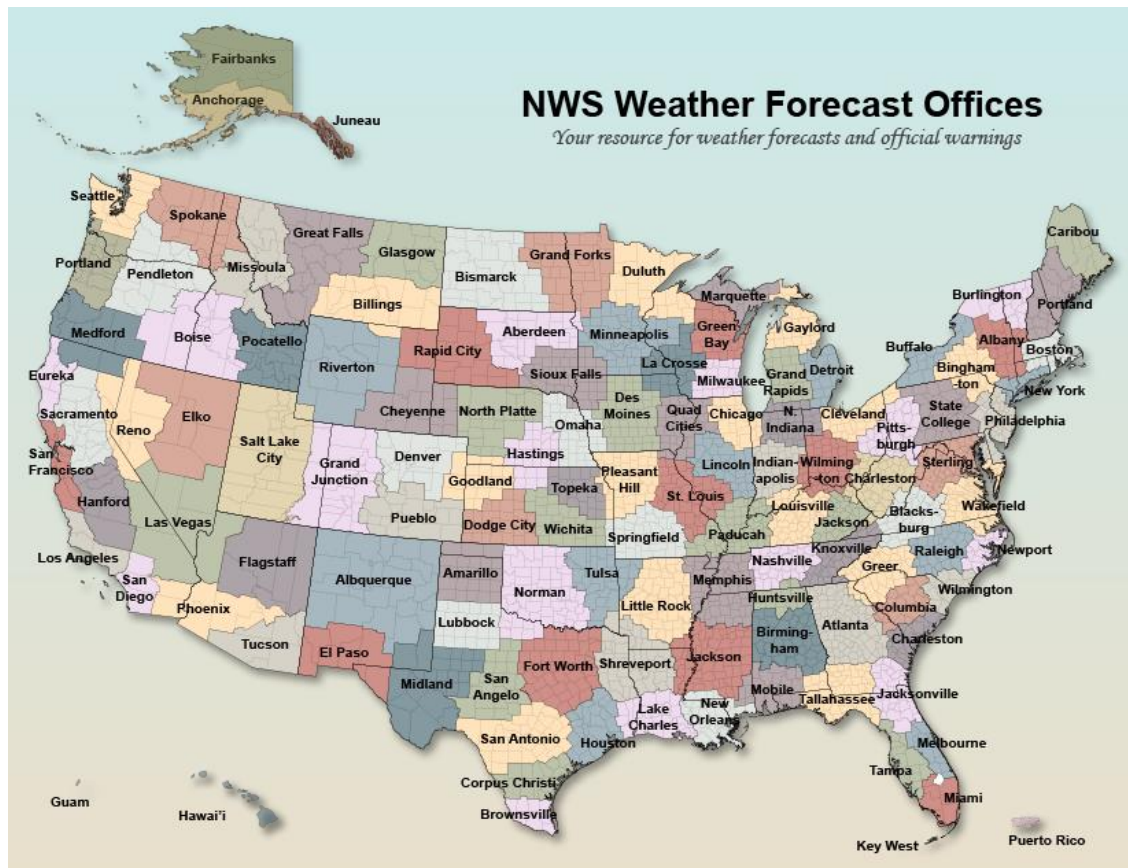
NWS Resources during Emergency Response

Jason Runyen

Warning Coordination Meteorologist
NWS – Austin/San Antonio



Local Weather Forecast Offices



Impact Based Decision Support Services



Immediate Response



Communicate with forecasters 24/7 via phone or NWSChat



Spot forecasts 24/7



IDSS Forecast Points page



Modeling



CAMEO/ALOHA - First responders run/NWS weather input



HYSPLIT - NWS run



HPAC - IMAAC run



Specialized IDSS



Onsite support in some cases



Customized briefings with your impact thresholds

Immediate Response



Spot Forecast via Phone



Get current weather conditions AND forecast from forecaster that is local to the area



Forecasters can learn more about the incident



NWSChat via Slack



Can quickly alert us of an incident



Private messaging is possible



Can share images



Immediate Response

IDSS Forecast Points Webpage



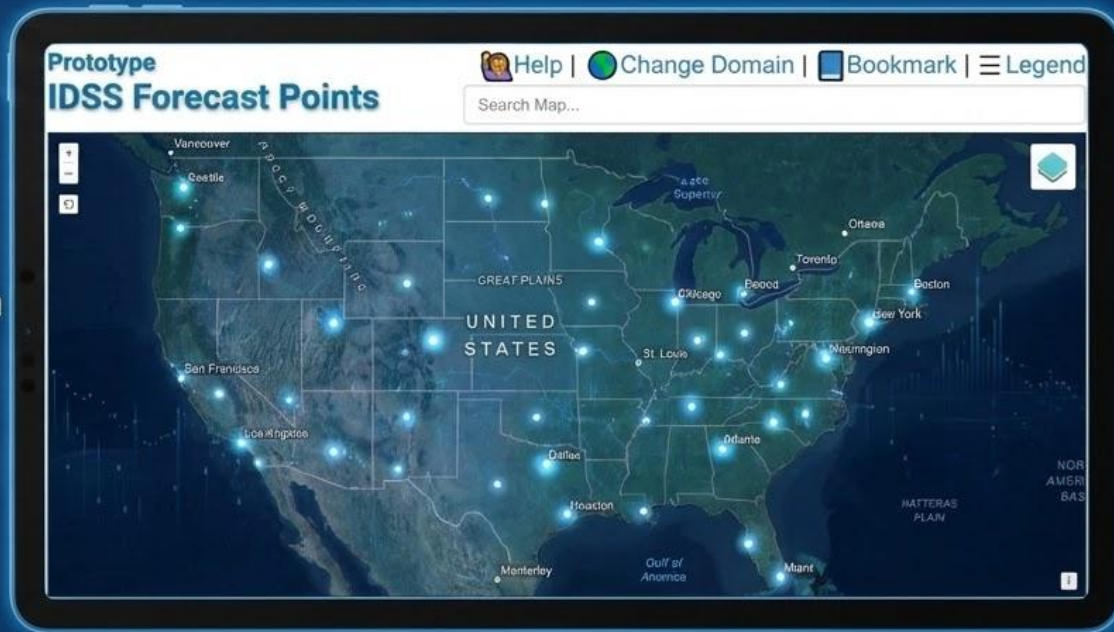
weather.gov/forecastpoints



Daily and hourly forecasts out to 7 days available immediately for any point in the U.S.



Tabular and graphical forecasts



IDSS Forecast Points Page

Table updated: 1128 am CST Fri. 12/5/2025 (Last Update: 12 minutes ago)

[Click for Text Forecast](#)

[EWX Forecast Discussion](#)

3 miles ENE of Austin, TX

Weekly Summary

Max Temp, °F

Min Temp, °F

Max Wind, mph

Min Wind, mph

Max Wind Gust, mph

Max Dew Point, °F

Min Dew Point, °F

Max RH, %

Min RH, %

Max Prob. of Precip., %

Max Prob. of Thunder, %

Max Cloud Cover, %

Min Cloud Cover, %

	Fri Dec 5	Sat Dec 6	Sun Dec 7	Mon Dec 8	Tue Dec 9	Wed Dec 10	Thu Dec 11
Max Temp, °F	56	74	70	60	66	75	74
Min Temp, °F	48	47	51	40	37	49	49
Max Wind, mph	6	6	10	6	7	9	6
Min Wind, mph	2	2	5	1	1	5	3
Max Wind Gust, mph	12	13	23	14	15	20	15
Max Dew Point, °F	45	51	52	35	44	49	46
Min Dew Point, °F	42	45	37	32	34	45	42
Max RH, %	83	96	90	73	89	89	77
Min RH, %	62	40	37	36	40	38	35
Max Prob. of Precip., %	5	3	0	0	0	0	0
Max Prob. of Thunder, %	1	1	0	0	0	0	0
Max Cloud Cover, %	90	81	8	9	10	14	22
Min Cloud Cover, %	71	0	2	2	3	5	2

Outlooks

Severe Thunderstorm

Excessive Rainfall

Day 1	Day 2	Day 3
Not Expected	Not Expected	Not Expected
Not Expected	Not Expected	Not Expected

Choose Plotting Order

Drag and Drop

- ☒ Weather
- ☒ Temperature, °F
- ☒ Wind Chill, °F
- ☒ Wet Bulb Globe Temperature, °F
- ☒ Wind Speed/Direction/Gust, mph
- ☒ Dew Point, °F
- ☒ Relative Humidity, %
- ☒ Heat Index, °F
- ☒ Probability of Precipitation, %
- ☒ Probability of Thunder, %
- ☒ Precipitation Amount, in
- ☒ Snowfall, in
- ☒ Ice, in
- ☒ Sky Cover, %
- ☒ Snow Level, feet above sea level
- ☒ Wave Height, ft

Save

Toggle All

Close



IDSS Forecast Points Page

Hourly Table

Day of week:	Friday 12/5													Saturday 12/6			
Time:	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12AM	1AM	2AM	3AM
Weather:																	
Temperature (°F):	48	50	53	55	56	56	56	54	53	51	50	50	50	49	50	49	48
Wind Speed (mph):	2	2	3	5	6	5	5	5	5	5	5	3	3	3	3	3	3
Wind Gust (mph):	6	8	9	10	12	12	12	12	10	10	10	9	9	9	8	8	8
Wind Direction (°):	170	180	180	180	180	170	170	170	170	180	180	190	200	200	210	200	200
Wind Direction:	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Dew Point (°F):	42	42	43	43	43	44	44	44	44	45	44	44	45	45	45	45	45
RH (%):	80	74	69	64	62	64	64	69	71	80	80	80	83	86	83	86	88
Prob. of Precip. (%):	5	1	1	1	1	1	1	1	1	1	0	0	0	3	3	3	3
Prob. of Thunder (%):	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Sky Cover (%):	84	90	90	82	77	71	78	86	81	82	84	87	88	72	77	81	81





Immediate Response



Spot Forecast via Web



spot.weather.gov

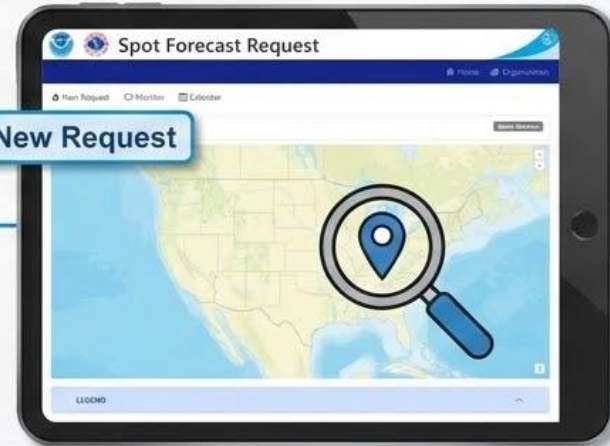


Select your location and weather parameters of interest



Forecast returned within about 15-30 minutes on a unique URL

New Request



Spot Forecast



Spot Forecast Request

[NWS Home](#)[News](#)[Organization](#)[New Request](#)[Monitor](#)[Calendar](#)

Forecast Details

HAZMAT Land Incident McPherson Hazmat Spill

Submitted: 12/02/2025 10:14 CST

Start: 12/02/2025 11:00 CST

Deliver: 12/02/2025 11:00 CST

Forecast Complete: 12/02/2025 12:06 CST

Requested By: McPherson County Emergency Management

Contact:

Phone:

Fax:

Basemap ▾ Layers ▾ Filter ▾

Status Markers



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Building a Weather-Ready Nation

Spot Forecast



Spot Forecast Request



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Forecast

[Print](#)

SPOT FORECAST for McPherson Hazmat Spill...McPherson County Emergency Management
National Weather Service WICHITA KS
1206 PM CST Tue Dec 2 2025

Forecast is based on forecast start time of 1100 CST on December 02.
IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER
SERVICE.

Please contact us via NWS Chat, 800mhz radio or phone if you have
questions or concerns with this forecast,

.DISCUSSION...

Quiet weather conditions are expected today with mostly sunny
skies and temperatures in the mid 40s. Southerly winds will
increase to 10-15 mph by 1-2 PM. A few gusts may approach 20 mph,
especially from 1-4 PM. Wind speeds will decrease towards sunset
(5-6 PM) to 5-10 mph. A cold front will pass through between 5-7
AM, shifting winds from the north/northwest at 5-15 mph. Northerly
gusts will increase to 20-25 mph by late Wednesday morning.



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Spot Forecast



Spot Forecast Request

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Forecast

[Print](#)

.REST OF TODAY...

Sky/weather.....Sunny (0-10 percent).

CWR.....0 percent.

Chance of pcpn.....0 percent.

Max temperature.....Around 44.

Min humidity.....51 percent.

Surface winds (mph).South winds 8 to 14 mph.

Mixing height.....1600 ft AGL.

Mixing winds.....South 13 to 18 mph.

TIME (CST) 11A 12P 1PM 2PM 3PM 4PM 5PM

Sky (%).....7 8 2 0 2 4 13

Weather cov.....

Weather type....

Tstm cov.....

CWR.....0 0 0 0 0 0 0

Chc of pcpn (%)..0 0 0 0 0 0 0

Temp.....32 37 42 44 44 43 40

RH.....68 58 54 51 52 54 59

Surface wnd dir..S S S S S S S

Surface wnd spd..8 10 11 13 14 11 10

Surface wnd gst..12 12 15 17 18 15 13

Mix hgt (kft)...0.8 1.2 1.4 1.6 1.3 0.7 0.5

Mixing wind dir..S S S S S S S

Mixing wind spd..13 15 16 18 17 16 16



NATIONAL WEATHER SERVICE

Building a Weather-Ready Nation

Plume Modeling Capabilities

ALOHA (CAMEO)



Run by first responders

Weather limitations

HYSPLIT



NOAA model

Run by local NWS
Forecast offices

More sophisticated
weather inputs

HPAC



Used by Defense Threat
Reduction Agency as
part of IMAAC emergency
response plumes

More sophisticated
weather inputs/outputs



Dispersion Modeling Guide

	 CAMEO	 HYSPLIT	 HPAC
CBRNE Ability	C	CRN	CBRNE
Best Use	 Quick 1 st guess w/in 30min for short, small releases	 HPAC Backup	 Most incidents or if custom wx is needed
Strengths	✓ Simple ✓ Used by First Responders	✓ Moderate complexity ✓ Numerous NWP models available	✓ Numerous weather inputs available ✓ Highly customizable output ✓ Probabilistic Output available
Weaknesses	✗ Cannot model releases >10km or >1hr ✗ Cannot model forecast conditions or complex weather ✗ Does not model chemical reactions, mixtures, terrain, or fragments	✗ Run time varies widely ✗ Does not model chemical reactions, dense gases, byproducts, deposition, complex terrain	✗ Complex interface ✗ Run time varies widely ✗ Inconsistent NWP model availability

CBRNE: Chemical, Biological, Radiological, Nuclear, and Explosive materials

 Dispersion models predict the spread of hazardous materials in the atmosphere.

Interagency Modeling and Atmospheric Assessment Center (IMAAC)

Coordination & Purpose



Single point for federal atmospheric dispersion modeling during hazardous releases



Provides hazard predictions to aid decision makers and protect the public.



Structure & Leadership



Led by DHS, supported by 7 other federal departments and agencies



Defense Threat Reduction Agency (DTRA) serves as the Technical Operations Hub.



ALOHA (CAMEO)

- Designed to produce results quickly
- Calculates how quickly chemicals are escaping from tanks, puddles, and gas pipelines- and predicts how those release rates change over time
- Models many release scenarios: toxic gas clouds, BLEVEs (Boiling Liquid Expanding Vapor Explosions), jet fires, vapor cloud explosions, and pool fires



A sample ALOHA threat zone estimate shown on a MARPLOT map (key locations of concern were added in MARPLOT).

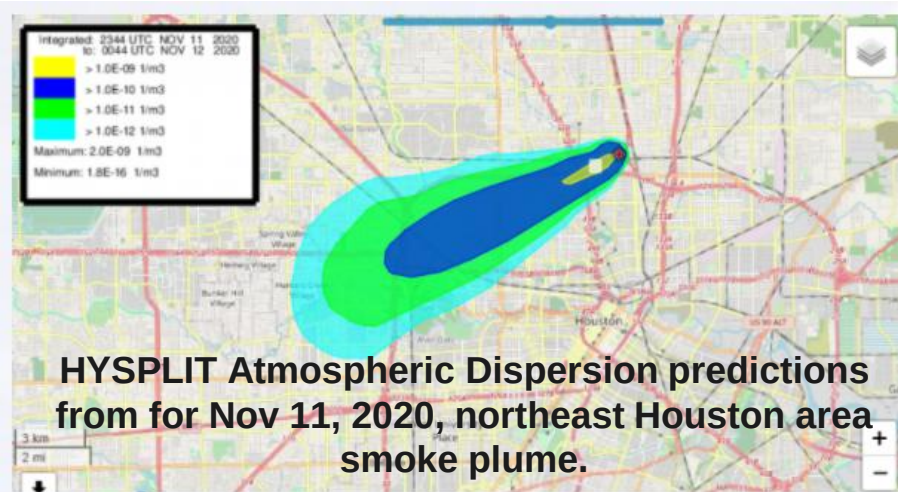




HYSPLIT



Aerial view of November 11, 2020 recycling plant fire in Houston, Texas. (Image courtesy of KHOU).



HYSPLIT Atmospheric Dispersion predictions from for Nov 11, 2020, northeast Houston area smoke plume.

- Complete system for computing simple air parcel trajectories, as well as complex transport, dispersion, chemical transformation, and deposition simulations
- One of the most extensively used atmospheric transport and dispersion models in the atmospheric sciences community





HPAC



- Hazard Prediction and Assessment Capability model
- Probabilistic chemical, biological, radioactive, nuclear (CBRN) downwind hazard prediction tool that support force protection, consequence of execution, and first responder operations – ingress/egress routes and situational awareness

Specialized IDSS Capabilities

Onsite Support



For longer duration events some NWS offices have the capability to deploy a meteorologist to the ICP

Usually embedded within the Planning Section

Customized Briefings



Written and oral weather briefings tailored to incident

Developed with impact thresholds in mind

Onsite Support



Customized Briefings

Texas City Y Spill – Spot Weather Forecast

Forecaster: Patrick Blood
Issue Time: 2:00 PM CDT – FRI MARCH 28, 2014

Changes since last forecast:

- Early afternoon minor improvement to visibilities within sea fog. Fog is forecast to thicken up again tonight ahead of an approaching cold front.
- The threat for strong thunderstorms along the coast is still low.



Scan the QR Code above with your cell phone or tablet to load this document.

Synopsis:

AREAS OF DENSE SEA FOG LINGER NEAR THE COAST THROUGH THIS AFTERNOON WITH MINOR IMPROVEMENT IN VISIBILITIES THROUGH LATE DAY. VISIBILITIES WILL REMAIN BETWEEN ONE TO THREE MILES ALONG THE IMMEDIATE COAST AND NEARSHORE WATERS. PATCHY LIGHT RAIN OR DRIZZLE WILL ACCOMPANY THE FOG. DENSE FOG WILL RETURN AND LINGER NEAR OR ALONG THE COAST THROUGH LATE TONIGHT. A COLD FRONT IS EXPECTED TO CROSS THE COAST SHORTLY AFTER MIDNIGHT SATURDAY. THIS WILL SCOUR OUT ANY RESIDUAL LOW LEVEL MOISTURE AND FOG. NORTH WINDS SATURDAY MORNING WILL BRIEFLY INCREASE TO 15 KNOTS AND THEN RELAX DURING THE AFTERNOON AS THE WINDS VEER TO THE NORTHEAST.

Spot Forecast for latitude 29.33 N and longitude 94.76 W:

.DISCUSSION...

FOG WILL AFFECT THE NEARSHORE GULF WATERS WITH VISIBILITIES OF 1 TO 3 MILES THIS AFTERNOON. THE FOG SHOULD THICKEN AGAIN AROUND SUNSET AND REDUCE VISIBILITIES TO UNDER 3 MILES. A COLD FRONT WILL MOVE THROUGH THE REGION BETWEEN MIDNIGHT AND 3 AM...TURNING WINDS TO THE NORTH AND USHERING IN DRIER AIR FOR SATURDAY. WINDS TURN TO THE EAST SUNDAY AS HIGH PRESSURE MOVES INTO LOUISIANA. DRY AND CLEAR WEATHER SHOULD PREVAIL THROUGH MONDAY.

.REST OF TODAY...

TIME (CDT)	2 PM	4 PM
SKY (%)	MCLDY	MCLDY
WEATHER COV...	S CHC	S CHC
WEATHER TYPE...	RN/FG	RN/FG
TEMP.....	73	74
RH.....	88	79
WIND DIR FROM...	S	SE
WIND (MPH)...	7	8
WIND GUST.....	15	15
RAIN CHANCES (%)	20	20
CEILING (FT)...	900	1000
VISIBILITY.....	3SM	4SM

National Weather Service
Houston/Galveston, TX

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Texas City Y Spill – Spot Weather Forecast

.TONIGHT...

TIME (CDT)	6 PM	8 PM	10 PM	MIDNIGHT	2 AM	4 AM
SKY (%)	MCLDY	MCLDY	MCLDY	MCLDY	MCLDY	MCLDY
WEATHER COV...	S CHC	CHANCE	CHANCE	CHANCE	S CHC	S CHC
WEATHER TYPE...	RN/FG	RNSHWR	RNSHWR	RNSHWR	RN/FG	RN/FG
TEMP.....	74	71	68	66	65	64
RH.....	78	84	90	93	90	90
WIND DIR FROM...	S	S	S	SW	W	N
WIND (MPH)...	9	8	6	5	5	7
WIND GUST.....	10					15
RAIN CHANCES (%)	20	30	30	30	20	20
CEILING (FT)...	1200	800	500	300	700	2500
VISIBILITY.....	2SM	1-2SM	4-1SM	4-1SM	3SM	5-6SM

NOTES REGARDING FORECAST CONTENT...

1. WIND DIRECTION IS WHERE THE WIND IS COMING FROM...A NE WIND DENOTES A WIND DIRECTION OUT OF THE NORTHEAST.
2. CEILINGS ARE MEASURED ABOVE GROUND (OR WATER) LEVEL (IN FEET).
3. VISIBILITY IS MEASURED IN STATUTE MILES. P6SM DENOTES PAST 6 MILES.

Aviation Discussion (for Galveston Scholes Field and Palacios)

LOWER CEILINGS AND FOG SHOULD RETURN BY EARLY EVENING WITH DENSE FOG WITH VISIBILITIES OF A HALF MILE OR LESS MAY RETURN SHORTLY AFTER SUNSET. LOW CLOUDS AND VIBRY WILL LIKELY PREVAIL UNTIL A COLD FRONT SCOURS OUT THE FOG SHORTLY AFTER MIDNIGHT SATURDAY. CLEARING SKIES AND UNLIMITED VISIBILITY WILL PREVAIL SATURDAY SUNRISE ONWARD.

Galveston Bay Forecast (wind directions are where the winds are from):

.REST OF TODAY...SOUTHEAST WINDS 5 TO 10 KNOTS. BAY WATERS SMOOTH. PATCHY FOG, A SLIGHT CHANCE OF SHOWERS.

.TONIGHT...SOUTH WINDS 5 TO 10 KNOTS BECOMING NORTHWEST AFTER MIDNIGHT. BAY WATERS SMOOTH. PATCHY DENSE FOG EARLY IN THE EVENING. PATCHY FOG LATE IN THE EVENING...THEN PATCHY DENSE FOG AFTER MIDNIGHT. A CHANCE OF SHOWERS UNTIL EARLY MORNING.

.SATURDAY...NORTH WINDS 10 TO 15 KNOTS. BAY WATERS SLIGHTLY CHOPPY. PATCHY DENSE FOG EARLY IN THE MORNING. A SLIGHT CHANCE OF SHOWERS EARLY IN THE MORNING.

.SATURDAY NIGHT...NORTHEAST WINDS 5 TO 10 KNOTS. BAY WATERS SMOOTH.

.SUNDAY...EAST WINDS 5 TO 10 KNOTS BECOMING SOUTHEAST 10 TO 15 KNOTS IN THE AFTERNOON. BAY WATERS SMOOTH BECOMING SLIGHTLY CHOPPY IN THE AFTERNOON.

.SUNDAY NIGHT...SOUTHEAST WINDS 10 TO 15 KNOTS. BAY WATERS SLIGHTLY CHOPPY.

.MONDAY...SOUTHEAST WINDS 10 TO 15 KNOTS. BAY WATERS SLIGHTLY CHOPPY.

.MONDAY NIGHT...SOUTHEAST WINDS 5 TO 10 KNOTS. BAY WATERS SMOOTH.

.TUESDAY...SOUTHEAST WINDS 5 TO 10 KNOTS INCREASING TO 10 TO 15 KNOTS IN THE AFTERNOON. BAY WATERS SMOOTH BECOMING SLIGHTLY CHOPPY IN THE AFTERNOON. A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS IN THE AFTERNOON.

.TUESDAY NIGHT...SOUTHEAST WINDS 10 TO 15 KNOTS. BAY WATERS SLIGHTLY CHOPPY. A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS.

National Weather Service
Houston/Galveston, TX

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NATIONAL WEATHER SERVICE

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Customized Briefings

WEATHER FORECAST	1. Incident Name	2. Date Prepared	3. Time Prepared						
	Austin NTSB Investigation	18 March 2025	2:47 AM						
4. Forecast for the Operational Period of:		5. Location/Area Covered:							
3/18/2025 to 3/19/2025		Austin, TX							
6. Current Watches/Warnings and Forecast of Weather Thresholds Covering the Operational Period									
Red Flag Warning for Low Humidity and Strong Winds Wednesday 5 AM to 9 PM									
 National Weather Service Austin/San Antonio, TX Weather Impact Matrix for Austin NTSB Investigation Valid: 03/18/2025 07 AM - 03/19/2025 07 AM CDT Call 1-833-629-0130 for additional weather support 									
	Tue 03/18 7 AM	Tue 03/18 10 AM	Tue 03/18 1 PM	Tue 03/18 4 PM	Tue 03/18 7 PM	Tue 03/18 10 PM	Wed 03/19 1 AM	Wed 03/19 4 AM	Wed 03/19 7 AM
Temperature	59°F	70°F	80°F	83°F	75°F	66°F	64°F	62°F	61°F
Heat Index	61°F	75°F	82°F	83°F	80°F	68°F	65°F	64°F	62°F
Wind Speed	14 mph	19 mph	20 mph	21 mph	20 mph	20 mph	17 mph	11 mph	12 mph
Wind Direction	S	S	S	S	S	S	S	SW	NW
Wind Gust	27 mph	32 mph	34 mph	34 mph	35 mph	33 mph	28 mph	21 mph	21 mph
Chance of Precipitation	0%	0%	0%	0%	0%	0%	5%	5%	0%
Weather	None	None	None	None	None	None	None	None	None
Chance of Thunder	0%	0%	0%	0%	0%	0%	1%	1%	0%

Issued: Tuesday March 18, 2025 02:24 AM CDT

Threat Level	None	Limited	Elevated	Significant	Extreme
Temperature	≤90 °F	90 to 94 °F	95 to 99 °F	100 to 104 °F	≥105 °F
Heat Index	≤95 °F	95 to 99 °F	100 to 104 °F	105 to 109 °F	≥110 °F
Wind Speed	≤15 mph	15 to 24 mph	25 to 29 mph	30 to 34 mph	≥35 mph
Wind Gust	≤20 mph	20 to 29 mph	30 to 34 mph	35 to 39 mph	≥40 mph
Chance of Precipitation	≤15 %	15 to 24 %	25 to 54 %	55 to 74 %	≥75 %
Chance of Thunder	≤15 %	15 to 24 %	25 to 54 %	55 to 74 %	≥75 %

Note - Grey color indicates no thresholds assigned
 Values in each 3-hour time block represent the worst case scenario, except for temperature, sky cover, and relative humidity where average values are displayed

7. Weather Forecast

Overnight: Partly cloudy, with a low around 56. South wind around 10 mph, with gusts as high as 25 mph.
Tuesday: Partly sunny, with a high near 85. South wind 5 to 15 mph, with gusts as high as 35 mph.
Tuesday Night: Partly cloudy, with a low around 60. South wind 5 to 20 mph, with gusts as high as 40 mph.
Wednesday: Sunny, with a high near 80. West northwest wind 5 to 15 mph, with gusts as high as 30 mph.
Wednesday Night: Mostly clear, with a low around 45. North northwest wind 5 to 15 mph, with gusts as high as 25 mph.
Thursday: Sunny, with a high near 73. Northeast wind 0 to 5 mph.
Thursday Night: Mostly clear, with a low around 45. South southeast wind around 5 mph.
Friday: Sunny, with a high near 82. South wind 5 to 15 mph, with gusts as high as 30 mph.
Friday Night: Mostly clear, with a low around 56. South wind 0 to 10 mph, with gusts as high as 20 mph.
Saturday: Mostly sunny, with a high near 87.
Saturday Night: Mostly cloudy, with a low around 64.
Sunday: A slight chance of showers and thunderstorms after 1pm. Mostly cloudy, with a high near 87. Chance of precipitation is 20%.
Sunday Night: A chance of showers and thunderstorms before 1am. Partly cloudy, with a low around 58. Chance of precipitation is 30%.
Monday: Mostly sunny, with a high near 81.

8. Forecast Discussion

Breezy weather is expected today with winds of 15 to 20 mph, gusting up to 40 mph. Gusty winds will persist throughout the day and through the evening. The forecast high temperature is 85°F. Gusty winds and drier conditions Wednesday will provide favorable conditions for the spread of wildfires. Dry conditions are expected through the end of the week with no rain expected.

9. Prepared by (Incident Meteorologist)

Harrison Tran - NWS Austin/San Antonio



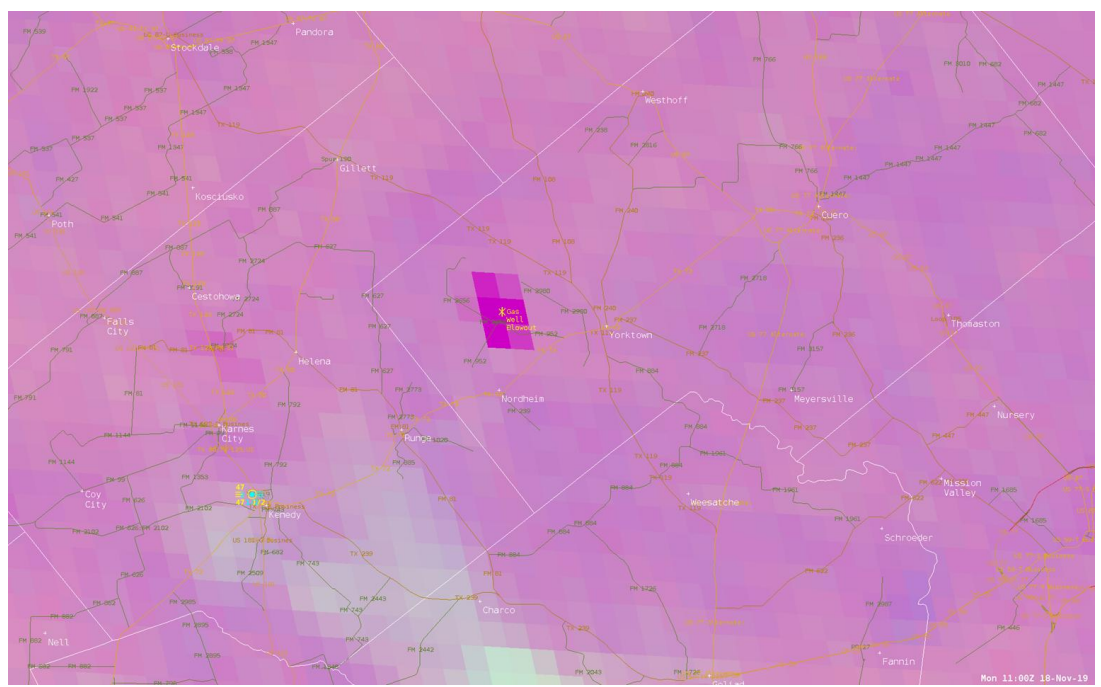
10. Approved by (Planning Section Chief)

ICS 213-WX

For the latest hourly forecast and current conditions scan QR code or visit:

<https://go.usa.gov/xsnh2>





Real-World Applications

Nov 2019 Natural Gas Well Blowout - DeWitt County



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Building a Weather Ready Nation

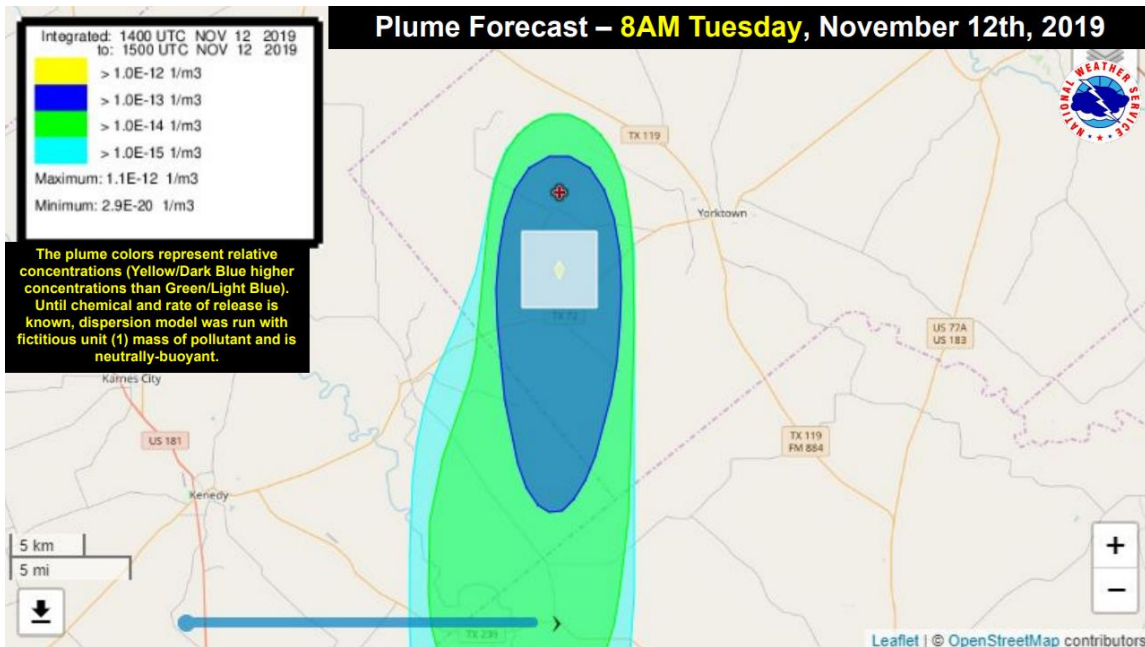
DeWitt County Natural Gas Well Blowout

- Meteorologists from NWS Austin/San Antonio provided remote support to Texas Division of Emergency Management and DeWitt County Office of Emergency Management for 18 days
- Daily weather forecast in an ICS-213 Form were sent
- Daily plume modeling was sent
- Forecasters were able to detect heat signature on satellite



NATIONAL WEATHER SERVICE
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DeWitt County Natural Gas Well Blowout



WEATHER FORECAST

1. Incident Name

DeWitt County Gas Well Blowout

2. Date Prepared

19 November 2019

3. Time Prepared

4:00 PM

4. Forecast for the Operational Period of:

11/20/2019

5. Location/Area Covered:

6 miles west of Yorktown, Cottonpatch Rd/FM952

6. Current Watches/Warnings and Forecast of Weather Thresholds Covering the Operational Period

No watches or warnings are anticipated during the operational period.

Sunrise: 657 AM CST Sunset: 534 PM CST

Mixing Height is worst case scenario in each 3hr time block (ex. 4PM is lowest value from 4-7PM)

	Wed 11/20	Wed 11/20	Wed 11/20	Wed 11/20	Wed 11/20	Wed 11/20	Wed 11/20
	12 AM	3 AM	6 AM	9 AM	12 PM	3 PM	6 PM
Temperature	60°F	60°F	62°F	73°F	81°F	79°F	71°F
Heat Index	60°F	61°F	64°F	77°F	83°F	82°F	77°F
Wind Speed	8 mph	5 mph	8 mph	14 mph	19 mph	14 mph	11 mph
Wind Direction	SE	SE	SE	SE	S	SE	SE
Wind Gust	8 mph	5 mph	8 mph	20 mph	27 mph	23 mph	20 mph
Chance of Precipitation	0%	0%	0%	10%	5%	5%	0%
Weather	None	Fog	Fog	None	None	None	None
Rainfall	0.0"	0.0"	0.0"	0.0"	0.0"	0.0"	0.0"
Lightning Activity Level	1	1	1	1	1	1	1
Mixing Height	124 ft	100 ft	98 ft	518 ft	374 ft	1249 ft	387 ft
Transport Winds	3 mph	6 mph	10 mph	27 mph	29 mph	23 mph	12 mph
Wind Direction	SE	SE	SE	SE	S	SE	SE

Issued: Tuesday November 19, 2019 03:13 PM

Threshold Level	None	Limited	Observed	Significant	Extreme
Temperature	<50 °F	50 to 54 °F	55 to 59 °F	100 to 104 °F	>105 °F
Heat Index	<50 °F	50 to 54 °F	55 to 59 °F	100 to 104 °F	>105 °F
Wind Speed	<10 mph	10 to 14 mph	15 to 19 mph	20 to 24 mph	>25 mph
Wind Gust	<10 mph	10 to 14 mph	15 to 19 mph	20 to 24 mph	>25 mph
Chance of Precipitation	<15 %	15 to 25 %	25 to 55 %	60 to 75 %	>80 %
Rainfall	<0.1"	0.1 to 0.59"	0.6 to 0.99"	1.0 to 1.99"	>2.0 to 5.99"
Lightning Activity Level	None	1-8 strikes/15 min	9-15 strikes/15 min	16-25 strikes/15 min	>25 strikes/15 min
Mixing Height	>4000 ft	4000 to 3000 ft	3000 to 2000 ft	2000 to 1000 ft	<1000 ft
Transport Winds	<10 mph	10 to 14 mph	15 to 19 mph	20 to 24 mph	>25 mph

7. Weather Forecast

Tonight/Patchy fog after 3am. Otherwise, increasing clouds, with a low around 60. Southeast wind 5 to 10 mph.

Wednesday: Patchy fog before 9am. Otherwise, cloudy, then gradually becoming mostly sunny, with a high near 81. South southeast wind 5 to 10 mph increasing to 15 to 20 mph in the afternoon. Winds could gust as high as 30 mph.

Wednesday Night: Increasing clouds, with a low around 65. South southeast wind 5 to 15 mph, with gusts as high as 25 mph.

Thursday: A 20 percent chance of showers. Mostly cloudy, with a high near 79. South southeast wind 10 to 15 mph, with gusts as high as 25 mph.

Thursday Night: A 20 percent chance of showers and thunderstorms before midnight. Mostly cloudy, with a low around 63. South southeast wind 5 to 15 mph, with gusts as high as 20 mph.

Friday: A 40 percent chance of showers and thunderstorms, mainly before noon. Partly sunny, with a high near 75. South wind 5 to 10 mph becoming north in the afternoon.

Friday Night: Mostly clear, with a low around 45. North northeast wind around 10 mph.

Saturday: Sunny, with a high near 65. North northeast wind around 10 mph.

8. Forecast Discussion

Winds will remain around 5-10 mph overnight which should keep the fog from becoming widespread, but some patchy fog remains possible. Morning clouds should give way to mostly sunny skies by tomorrow afternoon. Temperatures will top out in the lower 80s and moisture and surface southerly winds increase further in the afternoon. A slight chance of rain will begin as early as Wednesday night. Rain and thunderstorm chances increase on Friday as another cold front arrives. The weekend looks to be mostly dry with cooler air returning to the region.

9. Prepared by (Incident Meteorologist)

Nick Hampshire - NWS Austin / San Antonio

10. Approved by (Planning Section Chief)



NATIONAL WEATHER SERVICE
Building a Weather Ready Nation



Non-Weather Emergency Messages (NWEM)

and

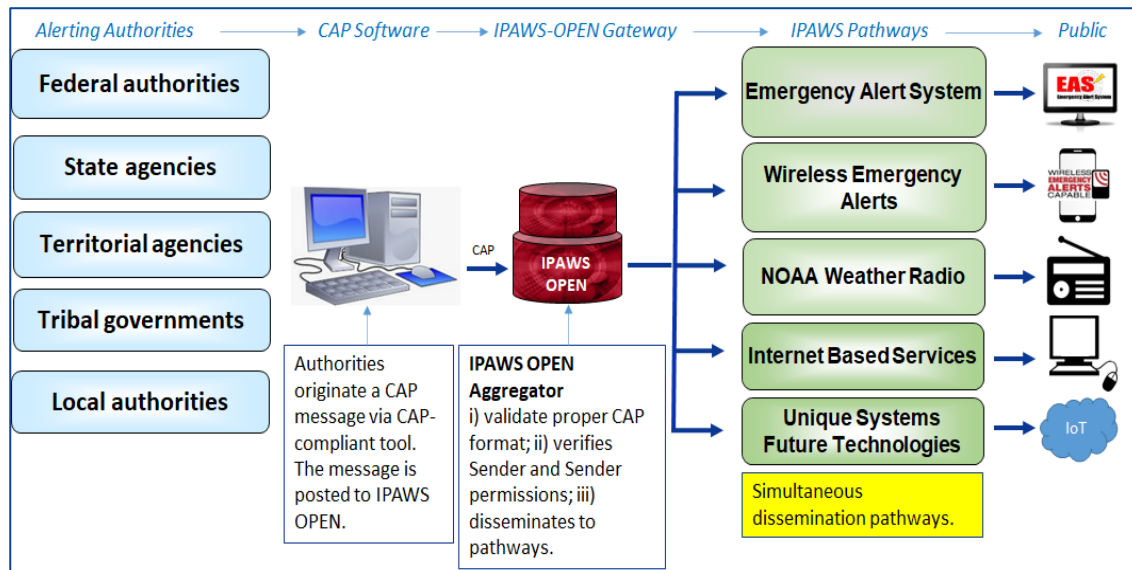
Integrated Public Alert & Warning System (IPAWS)





IPAWS

National Weather Service



- IPAWS is a National System for Local Alerting
 - Supports sending of local alerts from local, state, tribal, territorial officials during emergencies and from the President in the event of a catastrophic national emergency.
 - Provides authenticated emergency alert and information messaging from emergency officials to the public through:
 - Radio and television via the Emergency Alert System
 - Cellular phones via Wireless Emergency Alerts
 - NOAA All Hazards Weather Radio via IPAWS-NOAA gateway
 - Internet applications and websites via the IPAWS Public Feed



Non Weather-Emergency Messages (NWEM)

National Weather Service

What are Non-Weather Emergency Messages (NWEM)?

All non-weather IPAWS Emergency Messages that alerting authorities could issue through IPAWS to EAS, WEA, etc.

- Each state/local EAS plan may not authorize all NWEM types.
- NWS is the nation's **only** alerting authority for severe weather and flood warnings.

Event Code Descriptions

https://www.fema.gov/sites/default/files/documents/fema_event-codes-glossary_02-01-2021.pdf

ADR	Administrative Message
AVA	Avalanche Watch
AVW	Avalanche Warning
BLU	Blue Alert
CAE	Child Abduction Emergency
CDW	Civil Danger Warning
CEM	Civil Emergency Message
EQW	Earthquake Warning
EVI	Evacuation Immediate
FRW	Fire Warning
HMW	Hazardous Materials Warning
LAE	Local Area Emergency
LEW	Law Enforcement Warning
NUW	Nuclear Power Plant Warning
RHW	Radiological Hazard Warning
SPW	Shelter In Place Warning
VOW	Volcano Warning



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Thank You! Questions?

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