

**APPENDIX B**

**NWS Discussions**

EXCEPTIONAL EVENTS DEMONSTRATION FOR 2022, 2023,  
AND 2024 PM<sub>2.5</sub> EXCEEDANCES AT JEFFERSON COUNTY

August 5, 2025

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. BOX 13087  
AUSTIN, TEXAS 78711-3087

## APPENDIX B: NWS DISCUSSIONS

### B.1: GROUP 3 - JUNE 12 THROUGH JUNE 16, 2022

VFR conditions will prevail through the evening. Haze due to Saharan dust lifting across the region will continue to result in visibilities in the 5 to 8 mile range through	06-12-22   23:50 UTC
Steady light southerly flow continues to pull Saharan dust across the gulf and into the region tonight producing	06-13-22   04:46 UTC
Looking at satellite images the dust continues to spill into the region although it looks like southeast Texas will be getting a bit more than southern Louisiana over the coming days as more dust is on the way here.	06-14-22   20:51 UTC
convergence will be maximized during the afternoon. Flow around the ridge will also allow dust from the Saharan Air Layer event to filter into the forecast area causing hazy conditions along with an increase in fine particulates, which our partners at Texas Commission of Environmental Quality and the Louisiana Department of Environmental Quality have issued code orange air quality alert days.	06-15-22   09:49 UTC
Luckily the airmass sitting overtop of us will remain relatively "dry" between the remnant Saharan Dust and daytime mixing, which will keep the Heat Index between 100 and 110	06-16-22   05:03 UTC

Figure B-1: NWS Area Forecast Discussions on June 12 through June 16, 2022, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area

## B.2: GROUP 4 - JULY 16 AND JULY 17, 2022

Corpus Christi NWS Office	
A weak to moderate onshore flow this morning will become moderate late this afternoon and evening over the southern bays and over the Gulf waters. Isolated showers and thunderstorms will be possible this morning, mainly north of Port Aransas. A weak to moderate onshore flow is expected late tonight into Sunday. <b>Saharan dust</b> may limit visibility at times today through Sunday.	
Weak to moderate onshore flow will persist as we head into the work week. Winds will begin to increase by mid week with Small Craft Advisory conditions developing at times. Otherwise, visibilities may be reduced periodically on Monday as <b>Saharan dust</b> pushes inland along the Middle Texas coast.	07-16-22   08:20 UTC
the period. <b>Saharan dust</b> will provide hazy conditions today but not expected to lead to visibility restriction	07-17-22   05:37 UTC
Brownsville NWS Office	
NASA GMAO forecast for <b>dust</b> optical thickness shows Saharan <b>dust</b> will continue to affect the region this evening and persist through Sunday night. Surface visibilities likely will be reduced to 30 mph. As mentioned in the previous discussion, NASA GMAO forecast for <b>dust</b> shows the <b>Saharan dust</b> sticking around until this evening. Kept the forecast for haze	07-16-22   19:59 UTC
	07-17-22   09:12 UTC
San Antonio/Austin NWS Office	
across south-central TX. Simultaneously, a plume of <b>Saharan Dust</b> is expected to move into TX tonight through Sunday, which will aid in warming temperatures and further limiting any precipitation potential. Locations to the south and east of	07-17-22   05:24 UTC

Figure B-2: NWS Area Forecast Discussions on July 16 and July 17, 2022, from Multiple NWS Weather Forecast Offices, Covering Multiple Areas of Texas, Including the Port Arthur Memorial School Monitoring Area

### B.3: GROUP 6 – FEBRUARY 27 AND 28, 2023

Fort Worth NWS Office
<p>A powerful storm system is ejecting into the Plains this evening with widespread severe weather ongoing across parts of the Texas Panhandle into western Oklahoma along a cold front. A rapidly deepening surface cyclone across southwest Kansas is being aided by intense wind fields above the surface. This has led to a full on dust storm across parts of West Texas where visibilities are zero and winds have gusted to near 80 mph. A recent gust to 76 mph was reported at Lubbock with 0 SM visibility. While these intense winds will generally stay well to our west, we will see an uptick in wind speeds through the late evening as the surface low spreads eastward. Gusts have been a little intermittent across North Texas this evening, but should become more common ahead of the approaching cold front. Wind gusts to 50 mph will be possible ahead of the front through at least midnight.</p>
02-27-23   00:49 UTC

Figure B-3: NWS Area Forecast Discussions on February 27, 2023, from the Fort Worth NWS Weather Forecast Office, Covering West Texas and Oklahoma

**B.4: GROUP 8 - MAY 22, 23, 24, 26, AND 27, 2023**

Lake Charles NWS Office	
At the surface, weak ridging is progged to remain over the NW Gulf coast, yielding light and variable winds.	05-22-23   21:00 UTC
Wx map shows weak high pressure across the region, with light and variable winds. Clearing skies, along with	05-23-23   02:26 UTC
Mississippi Valley. A weak backdoor cold front that is drifting south across the local area marks the light wind shift associated with the airmass building south with this ridge. A few showers and	05-24-23   07:38 UTC
Lake Charles NWS Office	
this is the case across southeast TX and all of LA. For all areas except Alexandria, that is, where locally prescribed burns have created some clouds of haze.	05-26-23   02:54 UTC
High pressure extending into the northern Gulf of Mexico will result in light variable winds and low s	05-27-23   16:20 UTC

**Figure B-4: NWS Area Forecast Discussions on May 22 through May 27, 2023, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area**

**B.5: GROUP 10 - JULY 15 THROUGH JULY 17, 2023**

Brownsville NWS Office	
not being as gusty as the last few afternoons. Finally, agricultural smoke from fires in neighboring Mexico infiltrated our area which was most noticeable this morning as visibility dropped 4 to 5 miles around sunrise. The smoke as since mixed-out but there remains hazy skies this afternoon	07-16-23   19:59 UTC
Corpus Christi NWS Office	
Hazy conditions are also possible at least through midweek as Saharan Dust streams into the region per NASA/GMAO Dust guidance.	07-16-23   05:29 UTC

**Figure B-5: NWS Area Forecast Discussions on July 16, 2023, from the Brownsville and Corpus Christi NWS Weather Forecast Offices, Covering Texas Including the Port Arthur Memorial School Monitoring Area**

**B.6: GROUP 12 - JULY 26 AND JULY 29, 2023**

Lake Charles NWS Office	
Winds will be near calm tonight under mostly clear skies. Lo	
	07-26-23   02:20 UTC
to upper 70s. With the surface high over the gulf, winds will	
generally be out of the SSW to WSW with no lack in moisture coming	
into the area. Unfortunately that does not	07-29-23   17:26 UTC
Brownsville NWS Office	
The first significant bout of Saharan Air Layer (SAL, or Saharan	
Dust) this season has arrived in Deep South Texas and the Rio Grande	
Valley. This dust has significantly dried ou	07-26-23   05:27 UTC
Finally, The NASA GMAO dust Aerosol Optical Thickness loops	
indicates the Saharan dust to stick around the next few days so	
anticipate hazy skies mixed in with just a few afternoon clouds.	
	07-26-23   08:01 UTC
The Saharan Air Layer (SAL, or Saharan Dust) is still over the	
region and will squash any potential showers and storms that attempt	
to form along the sea breeze later this afternoon and again Thursday	
afternoon. Another thing limiting rain chance	07-27-23   05:22 UTC

**Figure B-6: NWS Area Forecast Discussions on July 26 through July 29, 2023, from the Brownsville and Lake Charles NWS Weather Forecast Offices, Covering Texas Including the Port Arthur Memorial School Monitoring Area**



**B.7: GROUP 14 - AUGUST 24, AUGUST 25, AUGUST 28, AUGUST 31, SEPTEMBER 1, AND SEPTEMBER 2, 2023**

Lake Charles NWS Office	
The large and persistent ridge aloft remains in place. Hot and dry conditions continue with record or near record temps are occurring along with multiple wildfires.	08-24-23   02:45 UTC
section for specifics. Numerous fires have erupted due to the ongoing drought, and is still ongoing. These fires are destroying tens of thousands of acres of woodlands, numerous structures, and threatening entire towns. We cannot emphasize	08-25-23   02:45 UTC
With a half dozen or more wildfires ongoing across the region and more likely to initiate through the day today, areas of smoke have been added to the forecast for parts of the	08-25-23   08:33 UTC
Lake Charles NWS Office	
Southeast Texas producing RH values in the teens. This is bad news for ongoing wildfires across the region and several new wildfires have been observed on radar and satellite	09-02-23   04:43 UTC

Figure B-7: NWS Area Forecast Discussions on August 24 through September 2, 2023, from the Lake Charles NWS Weather Forecast Offices, Covering the Port Arthur Memorial School Monitoring Area

**B.8: GROUP 15 - OCTOBER 4, 2023**

Lake Charles NWS Office	
Alexandria reports haze, likely from Claiborne fire to the south. Ceilings should lift out and win	10-04-23   17:50 UTC

Figure B-8: NWS Area Forecast Discussions on October 4, 2023, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area

**B.9: GROUP 17 - DECEMBER 31 AND JANUARY 1, 2024**

Lake Charles NWS Office	
Light winds and dewpoints in the 40s may yield some patchy fog late this evening into early tomorrow morning. This could be locally exacerbated by smoke from amateur pyrotechnic enthusiasts. However, fog should dissipate	01-01-24   03:33 UTC

Figure B-9: NWS Area Forecast Discussions on January 1, 2024, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area

B.10: GROUP 18 - MAY 8 MAY 9, 2024, AND MAY 13, 2024

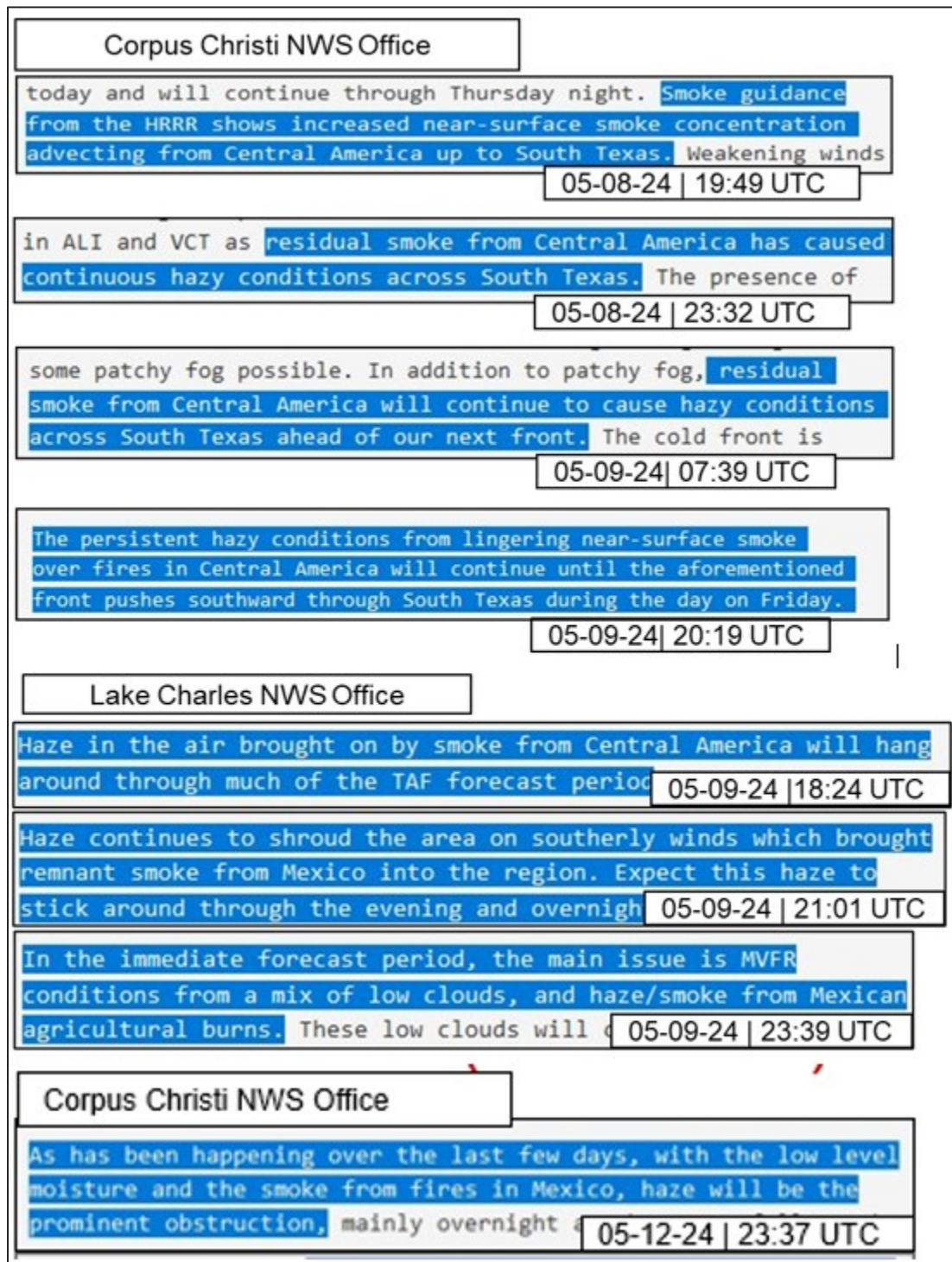


Figure B-10: NWS Area Forecast Discussions on May 8 through May 12, 2024, from the Corpus Christi and Lake Charles NWS Weather Forecast Offices, Covering Texas Including the Port Arthur Memorial School Monitoring Area



**B.11: GROUP 19 - MAY 15, 2024**

<b>Brownsville NWS Office</b>	
Otherwise, hazy conditions will persist through this evening, thanks southerly winds and burning in Mexico and Central America. Haze	
	05-15-24-24   19:52 UTC

**Figure B-11: NWS Area Forecast Discussions on May 15, 2024, from the Brownsville NWS Weather Forecast Office, Covering Texas Including the Port Arthur Memorial School Monitoring Area**

**B.12: GROUP 20 - MAY 24 AND MAY 25, 2024**

<b>Lake Charles NWS Office</b>	
The high humidity will mix with residual smoke from seasonal agricultural burning in the Yucatan and central/southern Mexico, that some light visibility restriction overnight due to patchy fog and haze, that will lift out by mid m	
	05-24-24   17:27 UTC
which will continue into the overnight. Particles from residual agricultural smoke may combine with the high humidity to produce brief light visibility restrictions from patchy fog/haze, although conditions should remain at MVFR	
	05-25-24   19:58 UTC

**Figure B-12: NWS Area Forecast Discussions on May 24 and May 25, 2024, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area**

**B.13: GROUP 21 - JULY 1 AND JULY 3, 2024**

<b>Corpus Christi NWS Office</b>	
Otherwise, As the trough associated with Chris moves west, the sky should clear out with only Saharan dust making for a hazy afternoon over the region. Winds continue to be weak to	
	07-01-24   07:08 UTC
<b>Houston NWS Office</b>	
Otherwise, AS the trough associated with Chris moves west, the sky should clear out with only Saharan dust making for a hazy afternoon over the region. Winds continue to be weak to	
	07-03-24   5:01 UTC

**Figure B-13: NWS Area Forecast Discussions on July 1 and July 3, 2024, from the Corpus Christi and Houston NWS Weather Forecast Offices, Covering Texas Including the Port Arthur Memorial School Monitoring Area**

B.14: GROUP 22 - JULY 6, 2024

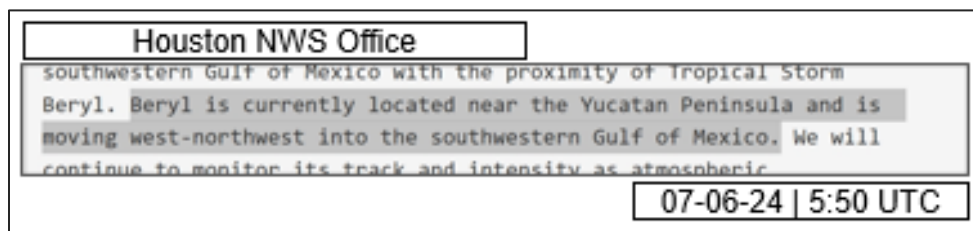


Figure B-14: NWS Area Forecast Discussions on July 6, 2024, from the Houston NWS Weather Forecast Office, Covering Texas Including the Port Arthur Memorial School Monitoring Area

B.15: GROUP 23 - JULY 30, JULY 31, AND AUGUST 1, 2024

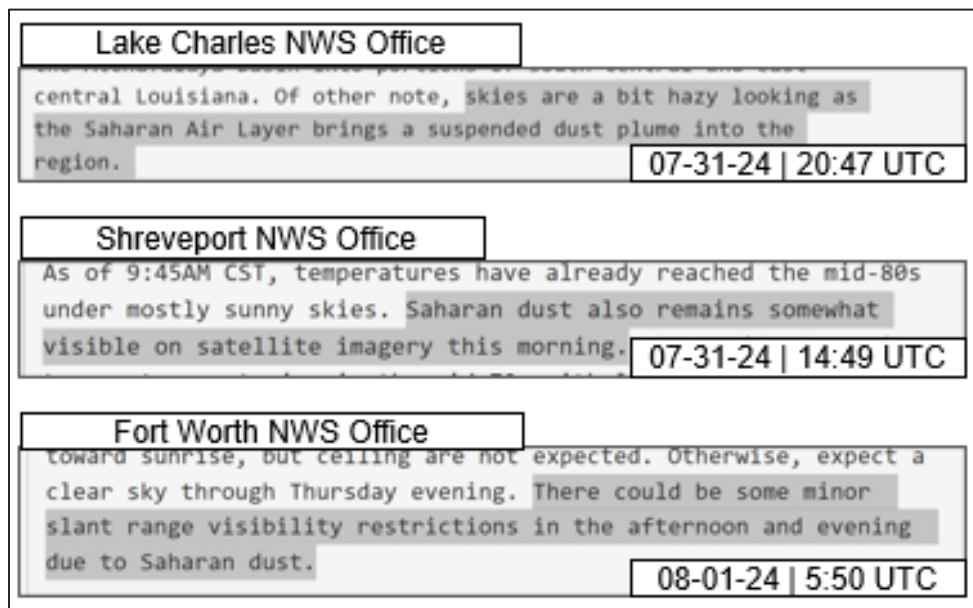


Figure B-15: NWS Area Forecast Discussions on July 31 and August 1, 2024, from the Lake Charles, Shreveport, and Fort Worth NWS Weather Forecast Offices, Covering Texas Including the Port Arthur Memorial School Monitoring Area

B.16: GROUP 26 - OCTOBER 10, 2024

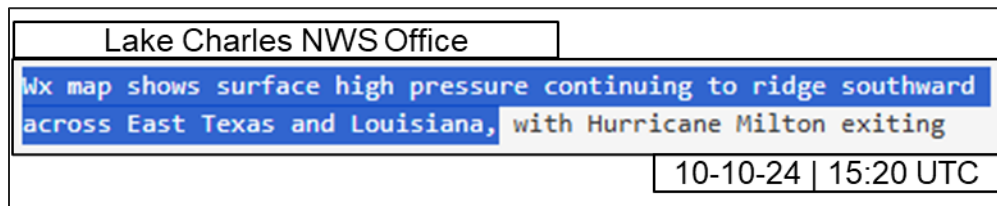


Figure B-16: NWS Area Forecast Discussions on October 10, 2024, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area

B.17: GROUP 27 - OCTOBER 15, 2024

Lake Charles NWS Office	
Hefty surface high pressure centered in lower Canada is ready to dive south into the central US, sending with it a much stronger cold front. This front will surge into the northern Gulf of Mexico late tonight on strong north-northeast winds. By Wednesday morning, gusty winds and much cooler conditions can be expected.	
10-15-24   09:27 UTC	

Figure B-17: NWS Area Forecast Discussions on October 15, 2024, from the Lake Charles NWS Weather Forecast Office, Covering the Port Arthur Memorial School Monitoring Area