### **APPENDIX B**

### **NWS DISCUSSIONS**

EXCEPTIONAL EVENTS DEMONSTRATION FOR 2022  $\rm PM_{2.5}$  EXCEEDANCES AT ATASCOSA, HIDALGO, NUECES, TARRANT, AND WEBB COUNTIES

AUGUST 5, 2025

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

### **APPENDIX B: NWS DISCUSSIONS**

### B.1: GROUP 1 - MAY 5, 2022

remaining in place. Light winds combined with the low level moisture may produce patchy fog and low CIGs with IFR/MVFR conditions overnight. Clouds are expected to decrease Friday morning with VFR conditions developing by mid to late morning. Strong gusty southerly winds across the Coastal Bend this afternoon will diminish by this evening with light and variable winds expected overnight. Across the Brush Country, light to moderate south winds will shift to the west and northwest this afternoon, then will continue to clock around to the northeast tonight and becoming light and variable CC: 05-05-22 | 18:10 UTC

Figure B-1: NWS Area Forecast Discussions on May 5, 2022, from the Corpus Christi NWS Weather Forecast Office, covering the World Trade Bridge Monitoring Area

### B.2: GROUP 2 - MAY 8 AND MAY 9, 2022

## Fig. 1: Austin/San Antonio NWS Office late tonight, and with winds remaining elevated low temperature will also continue above normal. Lows Monday morning p 05-08-22 | 23:17 UTC for these storms to be strong to severe. Atmospheric profiles support a hail and damaging wind threat, but again the threat overall is conditional if storms can even get going. 05-09-22 | 11:35 UTC Stratus is expected to re-develop from the Coastal Plains into the I-35 corridor between 03Z-06Z and the west through the Hill Country overnight and into the Rio Grande 08Z-12Z Tuesday. Stratus will again mix out between 15Z-18Z Tuesday. One other note, haze continues to linger across South Central Texas, partially owing to smoke particulate that has been advected into the region from seasonal agricultural burns taking place in Mexico. While visibility with the haze is mostly greater than 65M, there have been some periods the past couple of days where visibility briefly drops into the MVFR range. This has been mostly occurring in the mornin 05-09-22|3:39 UTC Fig. 2: Dallas/Fort Worth NWS Office through the evening. Any storms that develop would likely be severe with a damaging wind and hail thr 05-09-22 | 19:46 UTC

Figure B-2: NWS Area Forecast Discussions on May 8, and May 9, 2022, from the Austin/San Antonio, Corpus Christi, and Dallas/Fort Worth NWS Weather Forecast Office Covering the Von Ormy Highway 16, World Trade Bridge, and Haws Athletic Center Monitoring Area

### B.3: GROUP 3 - MAY 20 AND MAY 21, 2022

# Fig. 1: Corpus Christi NWS Office Strong south wind this morning will become strong southeast wind this afternoon. This will result in rough b 05-20-22 | 17:20 UTC Elevated convection has moved through the Coastal Bend and produced strong wind gusts. Expect activ 05-21-22 | 05:22 UTC Fig. 3: Dallas/Forth Worth NWS Office cap can be overcome. Initially, these storms will pose a threat for large hail and damaging winds, but should transition to primarily a damaging wind threat as they move east into the overnight hours. Quiet and storm-free wea 05-20-22 | 19:07 UTC

Figure B-3: NWS Area Forecast Discussions on May 20 and May 21, 2022, from the Corpus Christi and Dallas/Fort Worth NWS Weather Forecast Office Covering the World Trade Bridge and Haws Athletic Center Monitoring Area

## Fig. 2: San Antonio NWS Office and east of US highway 281. The main hazards would be large to very large hail and some locally strong wind gust 05-20-22 | 05:13 UTC across the region. Large to very large hail would be the greatest hazard with these storms but some strong wind gusts may also be possible. The latest SPC convective outloo 05-21-22 | 00:22 UTC

Figure B-4: NWS Area Forecast Discussions on May 20 and May 21, 2022, from the San Antonio NWS Weather Forecast Office Covering the Von Ormy Highway 16 Monitoring Area

### **B.4: GROUP 4 - JUNE 12 THROUGH JUNE 17, 2022**

Fig. 1: Brownsville NWS Office							
While skies will remain partly to mostly sunny, hazy conditions are expected due Saharan dust that has arrived and will stick around							
through the remainder of the period.	06-12-22	19:24 UTC					
The Saharan Air Layer (SAL) will continue to impact Deep South Texas through Friday based on the latest NASA GEOS model, maintaining hazy conditions across the area through the rest o 06-13-22   23:03 UTC							
although isolated showers/thunderstorms may return to the forecast on Monday due to deeper moisture emanating from the Bay of Campeche.							
Haze will persist courtesy of Saharan dust.	06-14-22	11:15 UTC					
around 80 degrees. Hazy conditions will prevail through at least the first half of the weekend as Saharan dust lingers across the							
region.	06-15-22	08:04 UTC					
The latest NASA/GMAO Dust Aerosol Optical Thickness forecasts suggest plumes of Saharan dust will prevail over the region during much of the period. Will keep the mention of hazy conditions through the forecast due to lingering Saharan dust across the area. One							
thing to note, rain chances may continue to							
next week as the Saharan dust would dry out	06-16-22	11:30 UTC					
forecast dry for now as most models keep pop		-					
Also, will continue to mention haze through							
some lingering Saharan dust.	06-17-22	09:59 UTC					

Figure B-5: NWS Area Forecast Discussions on June 12 through June 17, 2022, from the Brownsville NWS Weather Forecast Office, Covering the Edinburg East Freddy Gonzalez Drive Monitoring Area

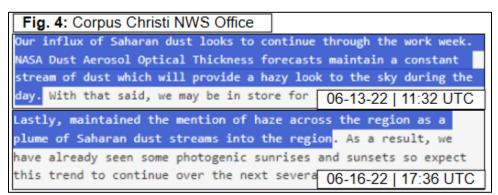


Figure B-6: NWS Area Forecast Discussions on June 13 and June 16, 2022, from the Corpus Christi NWS Weather Forecast Office, Covering the Donna Park and World Trade Bridge Monitoring Area

Fig. 3: ARR

identical setup. Saharan dust at higher levels may inhibit low cloud formation as it could slow radiational cooling, but think this will be offset by strong southeasterly sfc winds advecting low level moisture in rather quickly this evening. Winds should back 06-13-22 means worth mentioning, nonever, with the rise being related to Saharan dust plume currently situated over the area. As \$\infty 06-14-22 \infty\$

25 mph along the Rio Grande. One more thing to mention for today is the hazy skies due to Saharan dust lingering across the \$\alpha 06-17-22\$

Figure B-7: NWS Area Forecast Discussions on June 13, June 14, and June 17, 2022, from the Austin/San Antonio NWS Weather Forecast Office, Covering the Von Ormy Highway 16 Monitoring Area

Fig. 6: Fort Worth NWS Office

afternoon. Otherwise, skies will be mostly clear, although there
may be a noticeable increase in Saharan dust beginning to approach
from the southeast late in the day. This wi 06-13-22 | 10:28 UTC

decent relief from the heat. The upper-level pattern is also
conducive for the arrival of Saharan dust from the southeast
which will result in increasingly hazy ski 06-14-22 | 09:00 UTC

Hazy skies continue to be the main weather story today as the
plume of Saharan dust migrates northward. The dust is likely to
stick around through the night and gradually become less
concentrated tomorrow. The rest of today, 06-16-22 | 18:16 UTC

the next several hours. A modest cap between 850-700mb has
continued to trap pollutants down low with some residual Saharan
dust well aloft making for another hazy and
06-17-22 | 19:53 UTC

Figure B-8: NWS Area Forecast Discussions on June 13, June 14, June 16, and June 17, 2022, from the Fort Worth NWS Weather Forecast Office, Covering the Haws Athletic Center Monitoring Area

### B.5: GROUP 5 - JULY 16 THROUGH JULY 18, 2022

Fig. 5: CC & LAR	07-16-22					
gusty winds. Saharan dust is likely to move into the re						
providing hazy conditions. Not sure if it will be enough to limit						
yesterday for the Brush Country. NASA GMAO shows region of Saharan						
dust will remain over south Texas through this evening providing						
hazy conditions.	07-17-22					
around 10/ across the Brush Country. Heat indices too	ay will top					
out in the 105-109 range. Otherwise for today, the ta	il end of a					
large plume of Saharan dust that influenced South Texas over the						
weekend will push into South-Central Texas by mid day	07-18-22					

Figure B-9: NWS Area Forecast Discussions on July 16 through July 18, 2022, from the Corpus Christi NWS Weather Forecast Office, Covering the World Trade Bridge Monitoring Area

Fig. 3: ARR												
In	addition	to	the	warmth	and	dryness,	anot	her	batch	of S	Saharan	dust
is	pushing	into	o the	e regior	and	although	it	shou	ıldn't	redu	u <b>∈07-1</b> 7	7-22

Figure B-10: NWS Area Forecast Discussions on July 17, 2022, from the Austin/San Antonio NWS Weather Forecast Office, Covering the Von Ormy Highway 16 Monitoring Area