

Jon Niermann, *Chairman*
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Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 26, 2021

David Gray
Acting Regional Administrator
United States Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270
Docket ID No. EPA-HQ-OAR-2017-0548
[Submitted electronically through www.regulations.gov]

Re: Response to the United States Environmental Protection Agency's (EPA) May 25, 2021 Letter to Governor Abbott Regarding Intended Designation for El Paso County for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS)

Dear Acting Administrator Gray:

On May 25, 2021, you sent a letter to Governor Abbott providing notification of the EPA's intent to modify Texas's attainment/unclassifiable designation for El Paso County for the 2015 eight-hour ozone NAAQS to address the D.C. Circuit's July 10, 2020 decision. The letter stated that Texas could submit additional information for EPA consideration by July 26, 2021. This letter provides such additional information and requests that the EPA not modify Texas's designation consistent with this and previous information submitted by the State of Texas.

I. El Paso County should be designated as attainment for the 2015 eight-hour ozone NAAQS based on 2014 through 2016 monitoring data from the existing record showing attainment of the NAAQS.

El Paso County should be designated as attainment based on the 2014 through 2016 monitoring data that the EPA evaluated in determining the intended nonattainment designation for the area. On September 27, 2016, Texas submitted an exceptional event demonstration for a June 21, 2015 exceedance of the 2015 eight-hour ozone standard at the El Paso University of Texas at El Paso (UTEP) monitor and the EPA concurred on December 15, 2017. The monitoring data for June 21, 2015 were not included in the calculation of the 2014 through 2016 design value, resulting in a design value for El Paso County that met the NAAQS.

II. El Paso County should be designated as attainment for the 2015 eight-hour ozone NAAQS because analysis shows that El Paso County does not contribute to nonattainment in New Mexico.

The EPA used imprecise and incomplete technical analyses to reevaluate whether El Paso County potentially contributes to ambient ozone concentrations at the violating Desert View monitor in the Sunland Park nonattainment area in Doña Ana County, New Mexico (NM). The EPA's five-factor weight of evidence analyses default to county borders and the EPA should be using data specific to the Sunland Park nonattainment area rather than data for all of Doña Ana County. The EPA's analyses also do not properly consider the following information.

A. Emissions Data

The EPA stated that El Paso County emissions contribute to ozone exceedances at the Desert View monitor in the Sunland Park ozone nonattainment area. The EPA also stated that it will not consider international emissions in the context of designations. The Texas

Commission on Environmental Quality (TCEQ) disagrees with both statements and offers the following evidence related to emissions data to support the existing attainment designation for El Paso County.

Ozone precursor (nitrogen oxides [NO_x] and volatile organic compounds [VOC]) emissions are higher in El Paso County than in Doña Ana County, but this is not an indication that El Paso County actually contributes to ozone exceedances at the Desert View monitor in the Sunland Park ozone nonattainment area. Ozone formation is a complex chemical reaction that is influenced by meteorology and pollutant transport in addition to local precursor emissions. Tying El Paso County emissions to exceedances at the Desert View monitor in the Sunland Park ozone nonattainment area requires rigorous technical analysis, such as detailed back-trajectory and residence time analysis, which the EPA has not conducted.

The significant emissions contribution to the proposed El Paso-Las Cruces ozone nonattainment area's airshed comes from Juarez, Mexico. As shown in Figure 1: *Sources of Ozone Precursors in El Paso City and County* and Figure 2: *Juarez, Mexico NO_x and VOC Emission Sources* provided in Attachment 1: *Figures*, the ozone precursor emissions sources in Juarez, Mexico are more numerous and have larger emissions in proximity to the Desert View monitor in the Sunland Park ozone nonattainment area (shown in Figure 2) than the El Paso emissions sources.

The EPA's decision not to consider international emissions in the context of designations is not based on any provision in the Federal Clean Air Act (FCAA). The FCAA does not prohibit the EPA from considering the impact of international emissions in the context of designations, and the EPA can acknowledge that, in light of the contribution from Juarez, Mexico, El Paso County emissions do not likely influence ozone design values at the Desert View monitor in the Sunland Park ozone nonattainment area.

The impact of foreign emissions on air quality in El Paso County is well known and has existed for years, as illustrated by EPA actions approving attainment demonstrations for the PM₁₀ NAAQS (59 Fed. Reg. 2532, January 18, 1994), the carbon monoxide NAAQS (68 Fed. Reg. 39457, July 2, 2003), and the 1979 one-hour ozone NAAQS (69 Fed. Reg. 32450, June 10, 2004); as well as the EPA's approval of the El Paso area's maintenance plan for the 1997 eight-hour ozone NAAQS (74 Fed. Reg. 2387, January 15, 2009) required to address the transition from the revoked one-hour ozone NAAQS.

The EPA's TSD for the remanded designation states that "foreign contributions do not impact the EPA's analysis of domestic contributions in making designations decisions," TSD 12 n.17, "EPA's contribution analysis and initial designations process does not consider foreign anthropogenic emissions," *id.* at 20, and "while EPA does believe that those international emissions significantly influence air quality in Doña Ana and El Paso counties, that influence is properly addressed through the appropriate CAA 179B demonstration process, not the NAAQS designation process." *Id.* at 20.

However, to the extent that Doña Ana and El Paso Counties are impacted by contribution from Mexico, the EPA is considering contribution from Mexico. As discussed in this section regarding the analysis for the five factors the EPA considers relevant for determining boundaries for nonattainment areas, regional air quality is being impacted by emissions from Mexico. Additionally, without contribution from Mexico, it is unclear whether there would be any area "nearby to El Paso County that does not meet the relevant NAAQS," making a contribution analysis as to El Paso County improper and beyond the EPA's statutory authority. 42 U.S.C. § 7407(d)(1)(A)(i); FCAA, §107(d)(1)(A)(i).

The EPA lacks evidence from rigorous analysis demonstrating that El Paso County does contribute to exceedances at the Desert View monitor in the Sunland Park ozone nonattainment area. The EPA has also decided not to consider whether emission contributions from the rest of the State of New Mexico are contributing to nonattainment in Sunland Park. Although the EPA has decided not to, it can consider the emissions

contribution from Juarez, Mexico, Sunland Park, and the State of New Mexico in the context of designations.

Additionally, the El Paso-Las Cruces area is very different from other regions that the EPA has designated as multi-state ozone nonattainment areas. There are currently seven multi-state areas designated as nonattainment under the 2015 eight-hour ozone NAAQS (Chicago, Cincinnati, Louisville, New York-Northern New Jersey-Long Island, Philadelphia-Wilmington-Atlantic City, St. Louis, and Washington D.C.). These multi-state nonattainment areas are large, metropolitan, industrialized areas with significantly higher ozone precursor emissions. Ozone precursor emissions in each of these seven multi-state ozone nonattainment areas are 85% to 1,049% greater than the emissions in the EPA's proposed El Paso-Las Cruces ozone nonattainment area.

B. Population Density and Degree of Urbanization

The EPA concluded that El Paso County's larger population and higher population density (degree of urbanization) are contributing factors to ozone exceedances in Doña Ana County but failed to provide an analysis demonstrating that these characteristics actually impact the Desert View monitor in the Sunland Park ozone nonattainment area. An analysis of the population density of El Paso County (outlined in red) and the surrounding areas in Figure 3: *Population Density of El Paso County, TX and Surrounding Areas* provided in Attachment 1, demonstrates that most of El Paso County's population resides in the south central portion of the county, on the east side of the City El Paso, approximately 12 miles from the Texas-New Mexico border. The proposed El Paso-Las Cruces ozone nonattainment area is not an interconnected, population-dense urban area. Therefore, the EPA should not give any weight to El Paso's relative population size and density as a factor in designating El Paso County as nonattainment based on contributing to exceedances in the existing Sunland Park ozone nonattainment area in Doña Ana County, NM.

C. Traffic and Vehicle Miles Traveled (VMT)

The EPA's TSD for the remanded designation stated that El Paso County's larger share of traffic and greater number of VMT contribute to ozone exceedances in Doña Ana County. El Paso County's population is larger than Doña Ana County's, and therefore its traffic and VMT are also larger than Doña Ana County's. However, as noted in the EPA's TSD, there is limited commuting traffic between the two areas. Most of the employed citizens of El Paso and Doña Ana Counties do not travel outside their respective counties for work. Only 2% of El Paso County residents who work commute to Doña Ana County, which represents 0.6% of the total population of El Paso and Doña Ana Counties. The small fraction of El Paso residents who work in Doña Ana County are most likely to work in Las Cruces, NM, where the major employers in Doña Ana County are located.¹ This evidence does not support the use of traffic and VMT as a factor in designating El Paso County as nonattainment based on contributing to exceedances at the Desert View monitor in the Sunland Park ozone nonattainment area.

The EPA's TSD for the remanded designation indicated that based on a graphical depiction of VMT in El Paso County, "the southeastern portion of Doña Ana County is likely impacted by VMT emissions from El Paso County." However, this statement neglects the presence of the Interstate 10 highway in El Paso, TX, which experiences significant intranational and international traffic and related VMT. Interstate 10 traffic is not exclusively or even directly related to El Paso County commuter traffic or the population of El Paso County, but the EPA does not acknowledge this issue.

The majority (approximately 62%) of El Paso County's 2014 nitrogen oxides (NO_x) emissions were on-road mobile source emissions (based on EPA National Emissions Inventory data) due to the presence of Interstate 10 traffic, but El Paso County itself has relatively low VMT. Based on historical VMT data, approximately 25% of El Paso County's 2014 on-road NO_x

¹ From "NM Borderplex Regional Profile," Mesilla Valley Economic Development Alliance, <https://www.mveda.com/docs/Regional-Profile.pdf>. Accessed June 16, 2021.

emissions can be attributed to through traffic on Interstate 10, which is outside of the TCEQ's control. Additionally, the City of El Paso experiences a large number of vehicles entering from Mexico annually. In 2014, over 12,000,000 passenger cars, trucks, buses, and trains crossed from Mexico into the City of El Paso. These inbound crossings include vehicles that are registered in Mexico and use different fuels and have different engine emissions standards that the TCEQ cannot regulate. These vehicles also contribute to the VMT in the El Paso County area. The EPA should acknowledge the international and intranational traffic contributing to VMT in El Paso County.

Additionally, in contrast to El Paso County, the seven multi-state ozone nonattainment areas have populations that regularly travel outside their respective counties for work due to the interconnected nature of those economies, which contributes to increased VMT within the nonattainment areas. The VMT for each of the seven multi-state areas is 93% to 1,930% higher than that of El Paso County, and the VMT of the seven multi-state areas is 44% to 1,415% higher than that of the EPA's proposed El Paso-Las Cruces ozone nonattainment area.

Overall, El Paso County and Doña Ana Counties do not function as one integrated urban area. Therefore, the EPA should not consider traffic and VMT information as factors that support a nonattainment designation.

D. Meteorology

In December 2020, in response to discussions with EPA Region 6, the TCEQ submitted a supplemental analysis addressing El Paso County's potential contribution to the Desert View monitor in New Mexico using the existing 2014 through 2016 record data. Using a more precise back-trajectory analysis than presented in the EPA's original TSD, the TCEQ demonstrated that ozone at the Desert View Monitor is predominantly impacted by Mexico, not El Paso County, and it supported retaining Texas's attainment/unclassifiable designation for El Paso County. The TCEQ's analysis was based on data in the existing record that were used to make the original attainment designation and should have been used by the EPA in reevaluating the designation. The TCEQ resubmits this supplemental information for the EPA's consideration in Attachment 2: *December 21, 2020 Additional Information for El Paso County, Texas regarding remanded 2015 Eight-Hour Ozone Designation*. In addition, the results of a back-trajectory residence time analysis presented below demonstrate that the Desert View monitor exceedances were impacted by Mexico

This residence time or endpoint frequency analysis is based on 13 Hybrid Single-Particle Lagrangian Integrated Trajectory model (HYSPLIT) back trajectories centered at the Desert View monitor (31.796218°, -106.584434°). The HYSPLIT trajectories characterize air parcels at an altitude of 500 meters and were chosen at this altitude due to the small distance between the Desert View monitor and El Paso. This altitude, which at the times the trajectories were initiated was within the mixing layer where human activity takes place, is more relevant than altitudes that are above the mixing layer. To generate the greatest degree of accuracy, each trajectory is initiated at the time of the maximum one-hour ozone reading for each day with an eight-hour ozone concentration above 70 ppb during the years 2014 through 2016, the record data. The back trajectories are for 48 hours, starting at the monitor and following the air parcel back where it came from over the preceding 48 hours. The National Oceanic and Atmospheric Administration, North American Mesoscale Forecast System 12-kilometer input files were used for the HYSPLIT runs.

A trajectory is composed of hourly "endpoints." Since these are 48-hour trajectories, each trajectory has 48 endpoints. Each endpoint is an estimate of where a parcel of air is in time and space. For this analysis, the trajectory endpoints were plotted on a map, a grid was placed on the map, and the number of endpoints in each grid cell was summed. The results are shown in Figure 4: *HYSPLIT Endpoint Density* provided in Attachment 1, though the grid itself is not displayed. The more endpoints present over a particular area (in a particular grid cell), the more likely it is that the area affects the ozone concentrations at the monitor.

The warmer colors show a higher density of trajectory endpoints, the cooler colors represent a lower density, and white space indicates no trajectory endpoints.

This analysis shows Mexico has a higher density of trajectory endpoints than Texas, which indicates that contribution to Doña Ana County is primarily from Mexico. Additionally, to refine the back-trajectory residence-time analysis, each trajectory is categorized by geographical origin. Of the total 13 trajectories, eight (61.5%) were from Mexico, one was from Texas (7.7%), and four (30.8%) were unclassifiable. Unclassifiable trajectories are those that crossed into different states or countries before reaching the Desert View monitor. Overall, the trajectory analysis shows a higher number of green grid cells and trajectories in Mexico than Texas, identifying Mexico as a greater contributor to ozone at the Desert View monitor. The grid cell with the monitor is red because all the trajectories pass through it.

Overall, the HYSPLIT analysis indicates that for high ozone days during the record data period (2014 through 2016), the potential impact of El Paso County on New Mexico is very limited. Therefore, the EPA should not weigh the meteorology factor as supporting designating El Paso County as nonattainment based on contributing to exceedances in the existing Sunland Park ozone nonattainment area in Doña Ana County, NM. Instead, the meteorology factor provides weight to the conclusion that air parcels from Mexico, not El Paso County, cause the Sunland Park area ozone nonattainment.

E. Geography/Topography

The EPA's TSD for the remanded designation presented an imprecise reevaluation of the geographic/topographic considerations for the El Paso County and southern New Mexico areas and failed to consider key geographic/topographic characteristics that do not support the conclusion that emissions from El Paso County contribute to nonattainment in the Sunland Park ozone nonattainment area. The Franklin Mountains do affect airflow and ozone formation in the El Paso County and southern New Mexico areas, but this does not equate to El Paso County contributing to ozone exceedances at the Desert View monitor in the Sunland Park ozone nonattainment area. The following surface wind analysis shows that winds are diverted due to the mountains' altitude and their north to south spatial position. Using data from the Texas Air Monitoring Information System (TAMIS) and wind histograms, this analysis demonstrates the Franklin Mountains' influence on ozone at the Desert View monitor.²

The Franklin Mountains rise 7,192 feet above sea level, influencing wind flow at altitudes where human activity takes place.³ To assess the relationship between the mountains, local wind flow, and ozone formation, one-hour resultant wind direction and wind speed data were used to create the wind direction histograms in Figure 5: *Monitors near the River Valley with East and West Wind Flow* and Figure 6: *Monitors on the East Side of El Paso with Northerly Wind Flow* provided in Attachment 1.⁴

Figure 5 shows the wind channeling effect created by the Franklin Mountains as seen at the El Paso UTEP and Ascarate Park monitors, which are along the Rio Grande. In this area, the wind flows approximately east to west or west to east depending on the day. The wind histograms show two acute peaks at wind directions of approximately 100 and 275 degrees. These wind directions correspond with the location of the mountains and the river valley with respect to the monitor. Winds at these monitors are rarely from a northerly or southerly direction. The mountains funnel and force the wind through a common pathway or pass, resulting in the bimodal histogram plot.

Of significance is that the modes, especially the east mode (100 degrees) that represents the east-to-west wind flow in Figure 5, were frequently associated with high wind speeds, and this happens often, as seen in the plots. High wind speeds are associated with the

² Texas Air Monitoring Information System (TAMIS), TCEQ website, <https://www17.tceq.texas.gov/tamis/index.cfm?fuseaction=home.welcome>.

³ Texas Parks and Wildlife Department, website <https://tpwd.texas.gov/state-parks/franklin-mountains>.

⁴ All one-hour data from 2014 through 2016 were used to create a robust analysis for Figures 5 and 6.

dispersion of pollutants, including precursors and their secondary products, such as ozone. With the trajectory analysis showing Texas with 7.7% of wind flowing from east to west on high ozone days and showing that wind speeds are elevated, it is unlikely that the Desert View monitor is affected by Texas. This analysis shows that the mountains do affect ozone values at the Desert View monitor and that Mexico is a contributor to elevated ozone concentrations at the Desert View monitor.

In the eastern portion of the City of El Paso, the mountains limit wind flow from the east and west, creating south-to-north wind flow. Wind data from monitors in eastern El Paso (Ivanhoe and Skyline Park) generate very different wind histograms than those from monitors near the river valley (El Paso UTEP and Ascarate Park), as shown in Figure 6. Furthermore, emissions from point sources and the population are on the east side of the City of El Paso and are less likely to affect the Desert View monitor. Data from these monitors display a high frequency of winds from a south-to-north direction, with a peak wind direction of 175 degrees. This is the direction of wind flow from Mexico into Texas and New Mexico, which has been associated with high ozone. Furthermore, this direction is associated with low wind speeds, which are also conducive to ozone formation, allowing emissions from Mexico to drift slowly through El Paso and into New Mexico.

During cold-weather months, cold fronts create northwest-to-southeast wind flow. This flow can be seen at approximately 280 degrees and with a high concentration of salmon color in the histograms. These days, frequently associated with high wind speeds, are not conducive to ozone formation.

These bimodal wind direction distributions demonstrate that the mountains do affect wind flow in the El Paso and southern New Mexico areas. The mountains channel wind east to west and can rapidly move and disperse ozone and ozone precursors. Also, the residence time, or endpoint frequency trajectory analysis, shows that higher ozone is associated with winds from the south-southeast, not east to west. This south-southeast direction is from Mexico not Texas. Since the EPA did not consider the higher than average wind speeds caused by El Paso's topography, the EPA's analysis does not sufficiently address the dispersion caused by the topography.

As described above, the EPA's technical analyses used to reevaluate whether El Paso County potentially contributes to ambient ozone concentrations at the violating Desert View monitor in the Sunland Park ozone nonattainment area are imprecise, based on incomplete technical analysis, and disregard that El Paso County, TX and Doña Ana County, NM do not function as one interconnected urban area and have limited air shed mixing due to geography/topography. Based on these factors, along with the 2014 through 2016 monitoring data showing attainment of the NAAQS in El Paso County, the EPA should retain the original attainment designation for El Paso County.

III. The EPA's proposal to designate El Paso County as nonattainment is inconsistent with previous EPA designations under the 2015 eight-hour ozone NAAQS. The EPA's analysis and proposed designation treats El Paso County differently than other counties previously designated as attainment under the 2015 eight-hour ozone NAAQS.

The EPA's technical analyses of El Paso County factors is inconsistent with similar analyses performed for county designations in the Commonwealth of Pennsylvania (PA). Like El Paso County, both Berks County, PA (part of the Philadelphia-Wilmington-Atlantic City metropolitan area) and Northampton, PA (part of the New York metropolitan area), have total ozone precursor emissions greater than 20,000 tons per year, population greater than 250,000, similar population densities, more than 100,000 working residents, and VMT over 2 billion miles annually. Attachment 3: *Comparative Data for Specified Counties*, indicates that El Paso County has fewer overall major stationary sources (10 for El Paso County versus 44 for Berks County, PA and 31 for Northampton, PA based on 2014 EPA data), and significantly fewer county residents (approximately 13,000 to 17,000 less) commuting to a county with a violating monitor than Berks and Northampton Counties.

Importantly, in its TSD for the Philadelphia-Wilmington-Atlantic City 2015 eight-hour ozone nonattainment area, the EPA states that HYSPLIT back-trajectories show contribution from Berks County to the violating monitors in Camden and Gloucester Counties, New Jersey. However, since Berks County attained the 2015 eight-hour ozone NAAQS after the EPA approved an exceptional event, the EPA ultimately did not classify it as part of the Philadelphia-Wilmington-Atlantic City 2015 eight-hour ozone nonattainment area. While the EPA views these factors as not providing substantial weight towards an attainment/unclassifiable designation for El Paso County, they are used to support an attainment/unclassifiable designation for Berks County. Similarly, the EPA cited Northampton County's VMT and traffic analysis as one reason to exclude the county from the New York metro 2015 eight-hour ozone nonattainment area. However, while El Paso County's, VMT and population are similar to Northampton and Berks Counties', the EPA uses El Paso County's VMT and population to support a nonattainment designation for El Paso County.

Based on these analyses, along with the 2014 through 2016 monitoring data showing attainment of the NAAQS in El Paso County, the EPA should treat El Paso County similar to Berks County and Northampton County and retain the original attainment designation for El Paso County.

IV. If El Paso County is designated as nonattainment, the TCEQ disagrees that El Paso County should be combined with the existing Sunland Park nonattainment area in Doña Ana County, NM as one multi-state El Paso-Las Cruces ozone nonattainment area. Further, the TCEQ disagrees with the EPA's intended nonattainment area boundary of the entirety of El Paso County.

If the El Paso County area is designated as nonattainment, the EPA should follow historical precedents and not designate El Paso County as part of the existing Sunland Park ozone nonattainment area in Doña Ana County, NM under the 2015 eight-hour ozone NAAQS. The EPA designated El Paso County, TX and Doña Ana County, NM separately when the Sunland Park and El Paso County areas were each designated as nonattainment for the 1979 one-hour ozone NAAQS. The EPA cites technical factors including emissions, population, traffic, meteorology, and geography as the reason for creating a new multi-state ozone nonattainment area, but the EPA's incomplete analyses of these factors do not prove that El Paso County contributes to the Sunland Park ozone nonattainment area and it has never been designated as contributing under previous NAAQS. The EPA has not provided sufficient explanation why a different conclusion was reached in reevaluating the remanded 2015 eight-hour ozone NAAQS designation for El Paso County. Additional evidence supporting separate designations is provided in Sections I and II above.

If the EPA moves forward with a nonattainment designation, the nonattainment area should be limited to the City of El Paso boundary, similar to the existing Sunland Park ozone nonattainment area in Doña Ana County, NM. Outside of the City of El Paso boundary, El Paso County's emissions, population, and traffic are small as explained in Section II above. Additionally, El Paso County has previously implemented a vehicle inspection and maintenance program and two fuels programs to reduce vehicle emissions: the El Paso oxygenated fuels program and the El Paso Low Reid Vapor Pressure Gasoline program.

Figure 1 provided in Attachment 1 displays the locations of industrial sources that reported NO_x or volatile organic compounds emissions to the TCEQ as part of the annual point source emissions inventory. As depicted in the map, the majority of the emission sources in El Paso County are located within the boundaries of the City of El Paso. Based on this, only the City of El Paso should be included in any potential nonattainment designation for the area.

V. A nonattainment designation for El Paso County should not be tied to the existing implementation schedule for the Sunland Park ozone nonattainment area in Doña Ana County, NM.

If the El Paso County area is designated as nonattainment, it should not be tied retroactively to implementation deadlines that existed prior to the area being designated as nonattainment. The

marginal attainment date (August 3, 2021) and due dates for required nonattainment area state implementation plan (SIP) revisions (August 3, 2020 and August 3, 2021), for the existing Sunland Park nonattainment area in Doña Ana County, NM, have or will already have passed by September 22, 2021, the earliest time that the El Paso County area could potentially be designated as nonattainment. Requiring El Paso County to meet the previously established timeline for the Sunland Park ozone nonattainment area directly contradicts 42 United States Code (U.S.C.) §7511(b)(1); FCAA, §181(b)(1) requirements. 42 U.S.C. §7511(a); FCAA, §181(a) establishes the attainment date for marginal ozone nonattainment areas at three years from the effective date of a nonattainment designation. Per 42 U.S.C. §7511a(a); FCAA, §182(a), nonattainment area SIP revisions required under the marginal classification to address emissions inventory and emissions statements requirements are due to the EPA within two years from the effective date of a nonattainment designation. SIP revisions to address new source review requirements are due to the EPA within three years from the effective date of a nonattainment designation per 42 U.S.C. §7502(b); FCAA, §172(b). The plain language of the statute ensures that nonattainment requirements apply to areas after they are designated as nonattainment. The attainment designation for El Paso County was remanded to the EPA, not vacated. Thus, it remains effective. Any attempt to “link” El Paso County to the Sunland Park nonattainment designation implementation dates would exceed the EPA’s statutory authority and would be improper and illegal under the FCAA. It would also be an unconstitutional deprivation of due process.

If you have any questions or need additional information, please contact Tonya Baer, Director, Office of Air, at (512) 239-1228 or Tonya.Baer@tceq.texas.gov.

Sincerely,



Jon Niermann
Chairman

Enclosures:

Attachment 1: *Figures*

Attachment 2: *December 21, 2020 Additional Information for El Paso County, Texas regarding remanded 2015 Eight-Hour Ozone Designation*

Attachment 3: *Comparative Data for Specified Counties*

cc: The Honorable Greg Abbott, Governor of Texas
Catarina Gonzales, Office of Budget and Policy, Office of the Governor
Toby Baker, Executive Director, Texas Commission on Environmental Quality
Tonya Baer, Director, Office of Air, Texas Commission on Environmental Quality
Donna F. Huff, Deputy Director, Air Quality Division, Texas Commission on Environmental Quality
David Garcia, Director, Air and Radiation Division, EPA Region 6
Guy Donaldson, Branch Chief, State Planning and Implementation Branch, EPA Region 6

ATTACHMENT 1

FIGURES

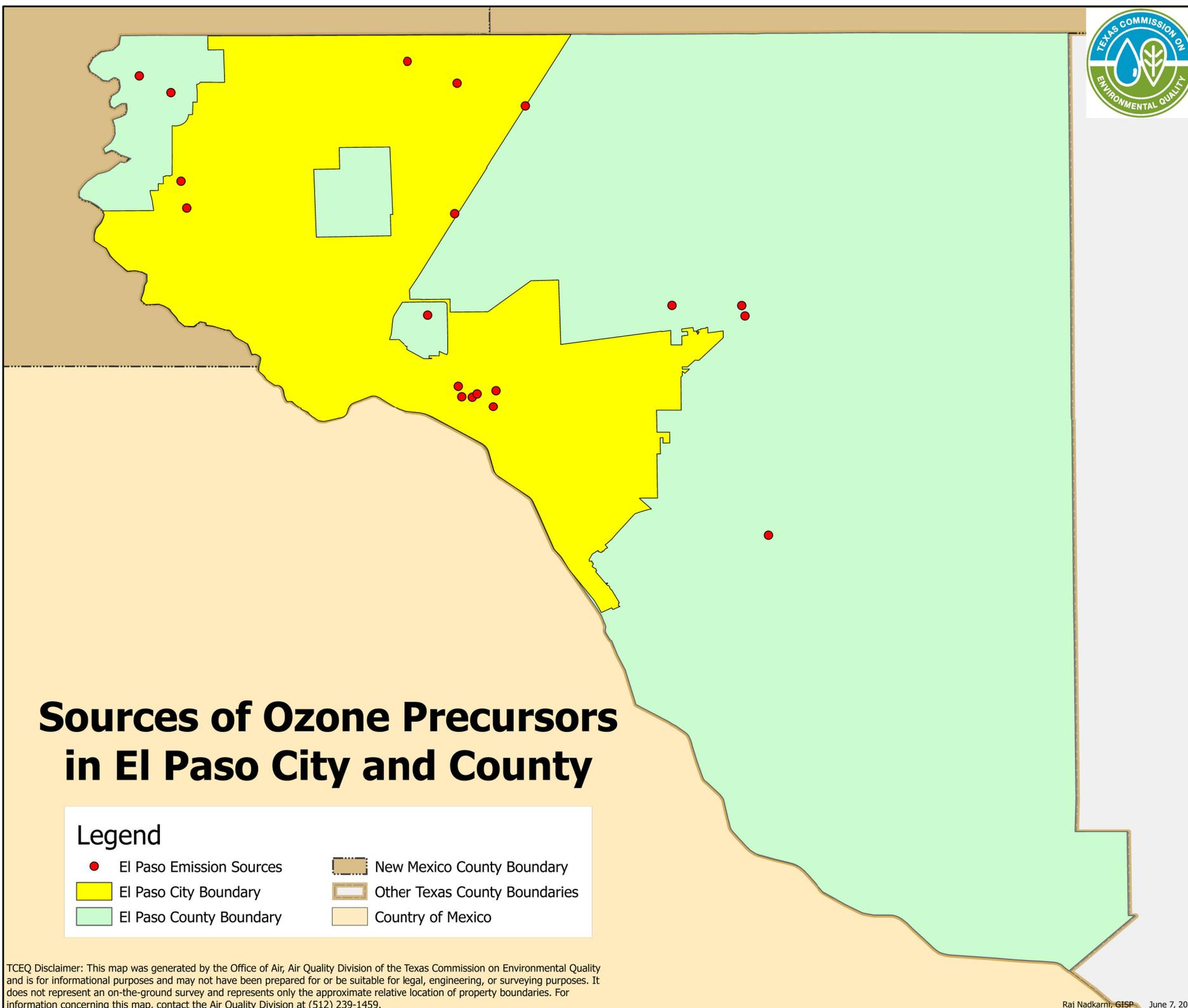


Figure 1: Sources of Ozone Precursors in El Paso City and County



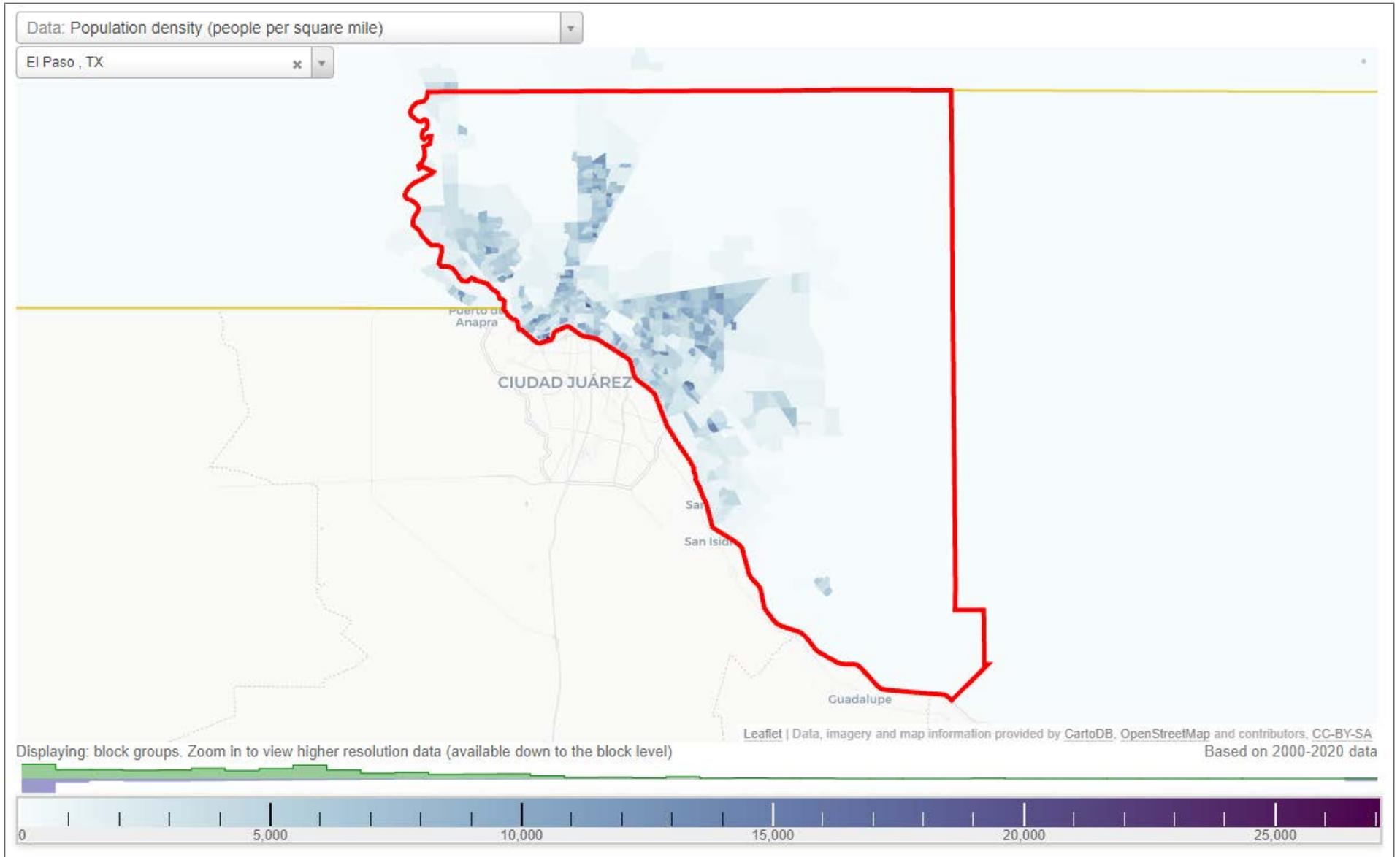
Juarez Mexico

NO_x and VOC Emission Sources



Disclaimer: This map was generated by the Office of Air, Air Quality Division of the Texas Commission on Environmental Quality and is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For information concerning this map, contact the Air Quality Division at (512) 239-1459.

Figure 2: Juarez, Mexico NO_x and VOC Emission Sources



Source: City Data website, <https://www.city-data.com/city/El-Paso-Texas.html>, accessed June 3, 2021.

Figure 3: Population Density of El Paso County, TX and Surrounding Areas

HYSPLIT Endpoint Density (2014-2016)

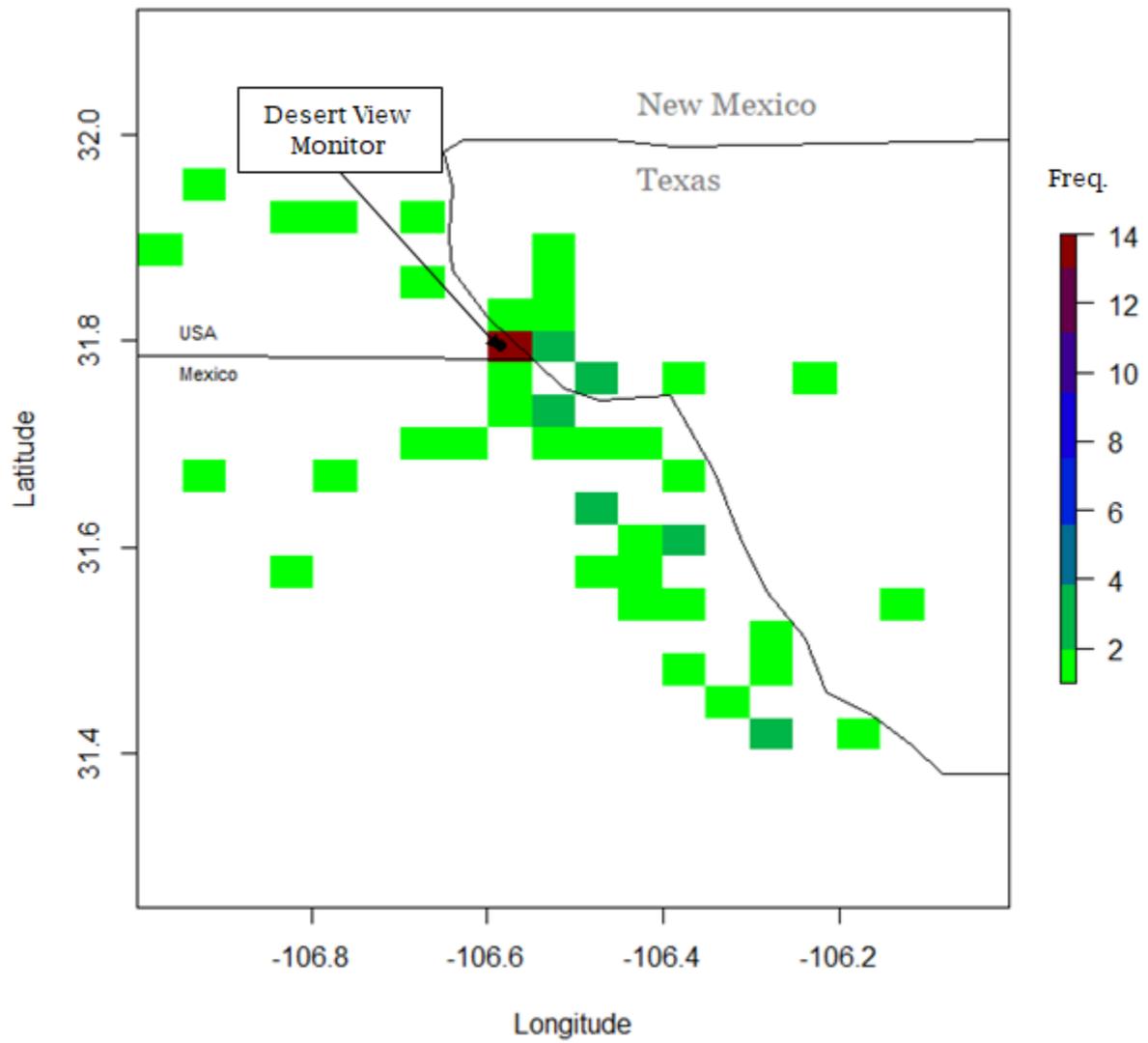


Figure 4: HYSPLIT Endpoint Density

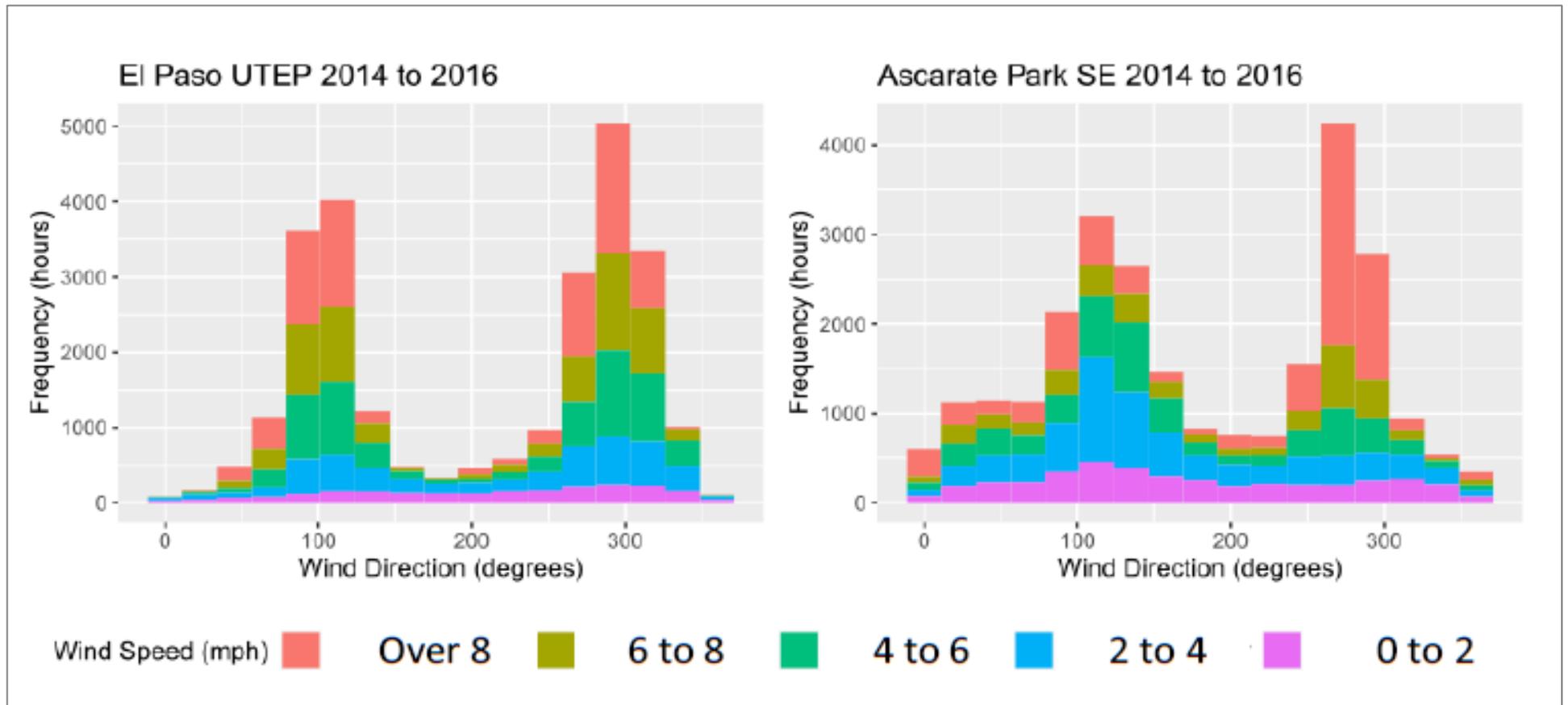


Figure 5: Monitors Near the River Valley with East and West Wind Flow

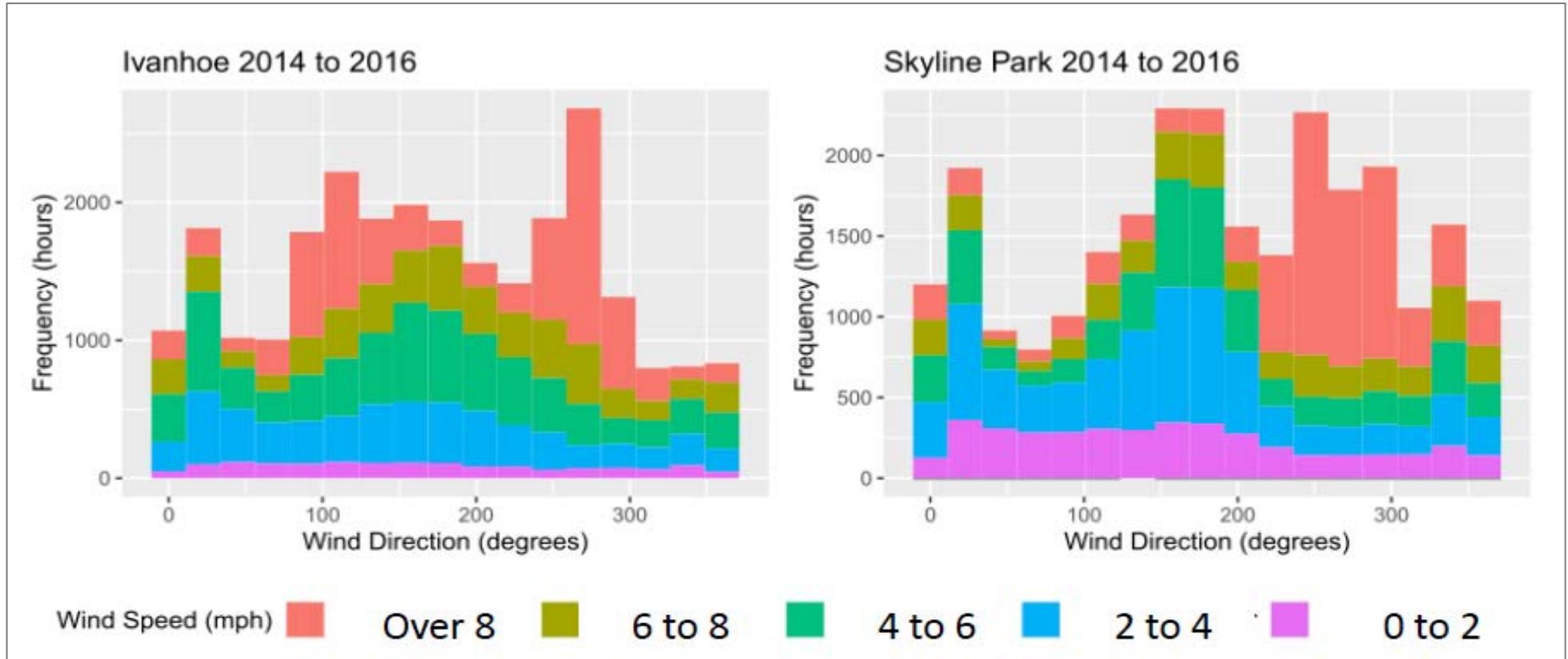


Figure 6: Monitors on the East Side of El Paso with Northerly Wind Flow

ATTACHMENT 2

**DECEMBER 21, 2020 ADDITIONAL INFORMATION FOR EL
PASO COUNTY, TEXAS REGARDING REMANDED 2015
EIGHT-HOUR OZONE DESIGNATION**

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 21, 2020

Mr. David F. Garcia, P.E.
Director
U.S. Environmental Protection Agency
1201 Elm Street, Suite 500
Dallas, Texas 75270

Subject: Additional Information for El Paso County, Texas regarding remanded 2015 Eight-Hour Ozone Designation

Dear Mr. Garcia:

The Texas Commission on Environmental Quality (TCEQ) is providing supplemental information for consideration by the United States Environmental Protection Agency (EPA) in support of retaining the original attainment designation for El Paso County, Texas for the 2015 eight-hour ozone National Ambient Air Quality Standard.

The enclosed paper, *High Ozone Back Trajectories from the Desert View Monitor*, provides a more precise back-trajectory analysis addressing the issue of El Paso County's potential contribution to the Desert View monitor in New Mexico. This analysis indicates that ozone at the Desert View Monitor is predominantly impacted by Mexico, not El Paso County. The EPA should reevaluate its analysis and focus on lower elevation trajectories generated using the 12-km resolution input model that are initiated at the hour of the day's peak, one-hour ozone concentration, similar to the TCEQ's analysis. This approach produces more accurate results for evaluating contributions to ozone in Doña Ana County, New Mexico, than the analysis included in the EPA's technical support document.

Thank you for your consideration of this supplemental information. If you have any questions or need additional information, please contact Donna F. Huff, Deputy Director, Air Quality Division at (512) 239-6628 or donna.huff@tceq.texas.gov.

Sincerely,

A handwritten signature in cursive script that reads "Tonya Baer".

Tonya Baer, Director
Office of Air

Enclosure

cc: Donna F. Huff, Deputy Director, Air Quality Division, TCEQ
Michael Feldman, EPA Region 6
Guy Donaldson, EPA Region 6

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High Ozone Back Trajectories from the Desert View Monitor

Introduction

This paper presents results related to the 13 days from 2014 through 2016 on which eight-hour ozone concentrations greater than the 2015 eight-hour ozone National Ambient Air Quality Standard (NAAQS) of 70 parts per billion (ppb) were recorded at the Desert View monitor in Doña Ana County, New Mexico. The Texas Commission on Environmental Quality (TCEQ) generated air parcel trajectories for each of these days. The results were generated using the Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) model, which characterizes the distance and direction a parcel of air, and subsequently air pollutants, will travel. This document details the data and parameters used as input into the model and the subsequent results generated.

Dates Reviewed

Trajectories were run for the dates presented in Table 1: *Desert View Monitor Data (2014 through 2016) on Dates the Eight-Hour Ozone Concentration Exceeded the 2015 Eight-Hour Ozone NAAQS*. These dates were selected because they correspond with all days an eight-hour ozone concentration greater than 70 ppb was recorded at the Desert View monitor. Days above 70 ppb are relevant because these are days with the greatest potential to affect an area's compliance with the 2015 eight-hour ozone NAAQS.

Table 1: Desert View Monitor Data (2014 through 2016) on Dates the Eight-Hour Ozone Concentration Exceeded the 2015 Eight-Hour Ozone NAAQS

Dates	Eight-Hour Ozone Concentration (ppb)	Peak One-Hour Value (ppb)	Peak One-Hour Time
5/28/2014	72	77	13:00
5/29/2014	72	76	12:00
6/10/2014	76	88	14:00
7/15/2014	72	80	13:00
7/22/2014	71	94	13:00
6/17/2015	77	93	15:00
6/21/2015	74	90	14:00
6/29/2015	76	82	11:00
8/10/2015	77	94	14:00
8/13/2015	71	76	13:00
8/17/2015	74	83	12:00
5/13/2016	71	78	16:00
6/6/2016	79	83	15:00

Parameters Entered into the HYSPLIT Model

HYSPLIT trajectories were generated at 100 and 500 meters (m) above ground level (AGL). Trajectories generated at 500 m AGL and below are believed to be representative of conditions where human activity is occurring. The trajectories display conditions from the hour the air parcel arrived at the receptor monitor (Desert View), back 24 hours extending from that geographic point. The start time selected for a trajectory was the hour the maximum one-hour ozone concentration was recorded at the monitor on the specific dates the monitor recorded eight-hour ozone concentrations greater than 70 ppb.

The meteorological data used to run the trajectories were obtained from the National Oceanic and Atmospheric Administration's Air Resources Laboratory (ARL). The meteorological dataset selected was the North American Model (NAM) 12-kilometer (km) resolution input model.

HYSPLIT Results

The results generated from this TCEQ analysis are presented in Figure 1: *HYSPLIT Results at 100 m from 13 Days in 2014 through 2016 that Exceeded the 2015 Eight-Hour Ozone NAAQS* and Figure 2: *HYSPLIT Results at 500 m from 13 Days in 2014 through 2016 that Exceeded the 2015 Eight-Hour Ozone NAAQS*. As depicted in these figures, the HYSPLIT output indicates that on dates the ozone concentration at the Desert View monitor exceeded the 2015 eight-hour ozone NAAQS, air predominantly traveled from the southeast and, to a lesser extent, the west or south; with the fewest from the east.

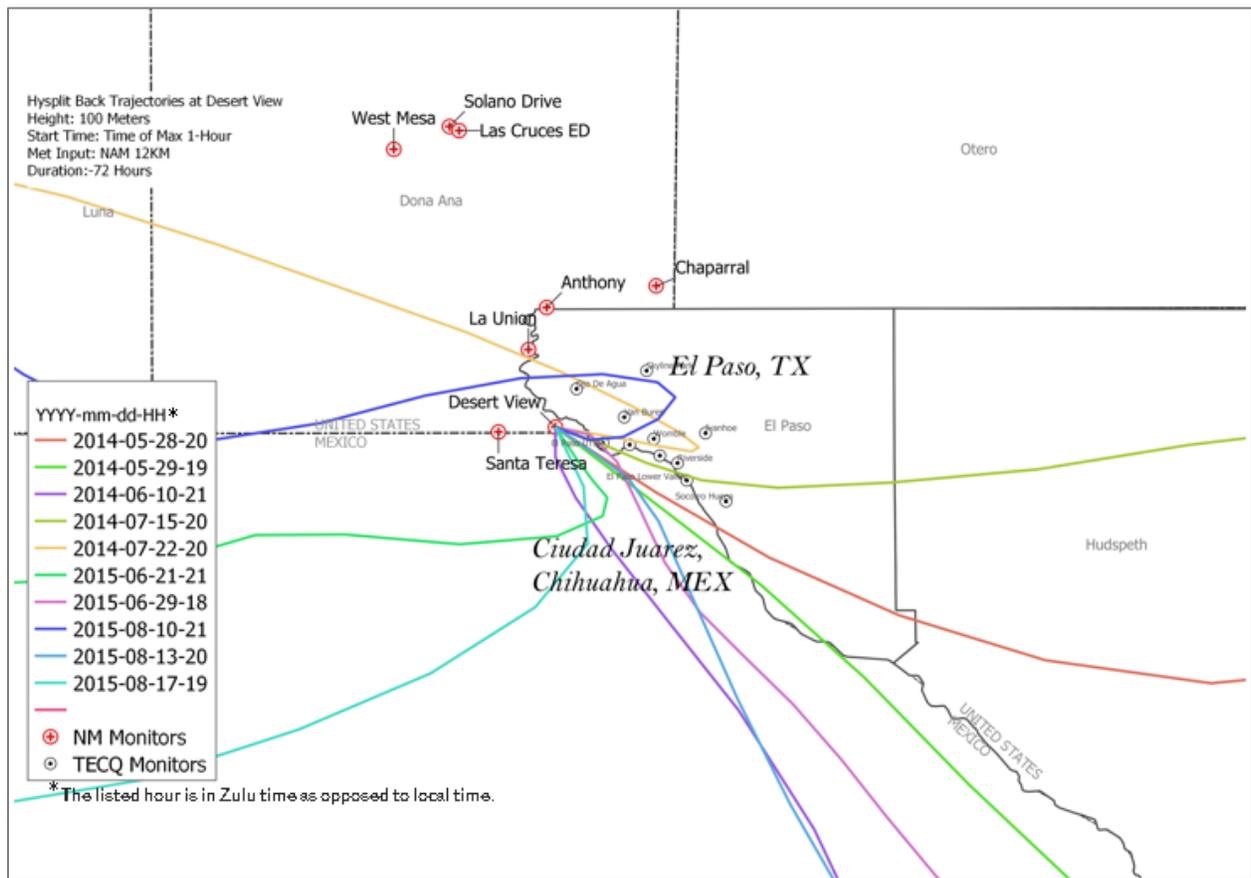


Figure 1: HYSPLIT Results at 100 m AGL from 13 Days in 2014 through 2016 that Exceeded the 2015 Eight-Hour Ozone NAAQS

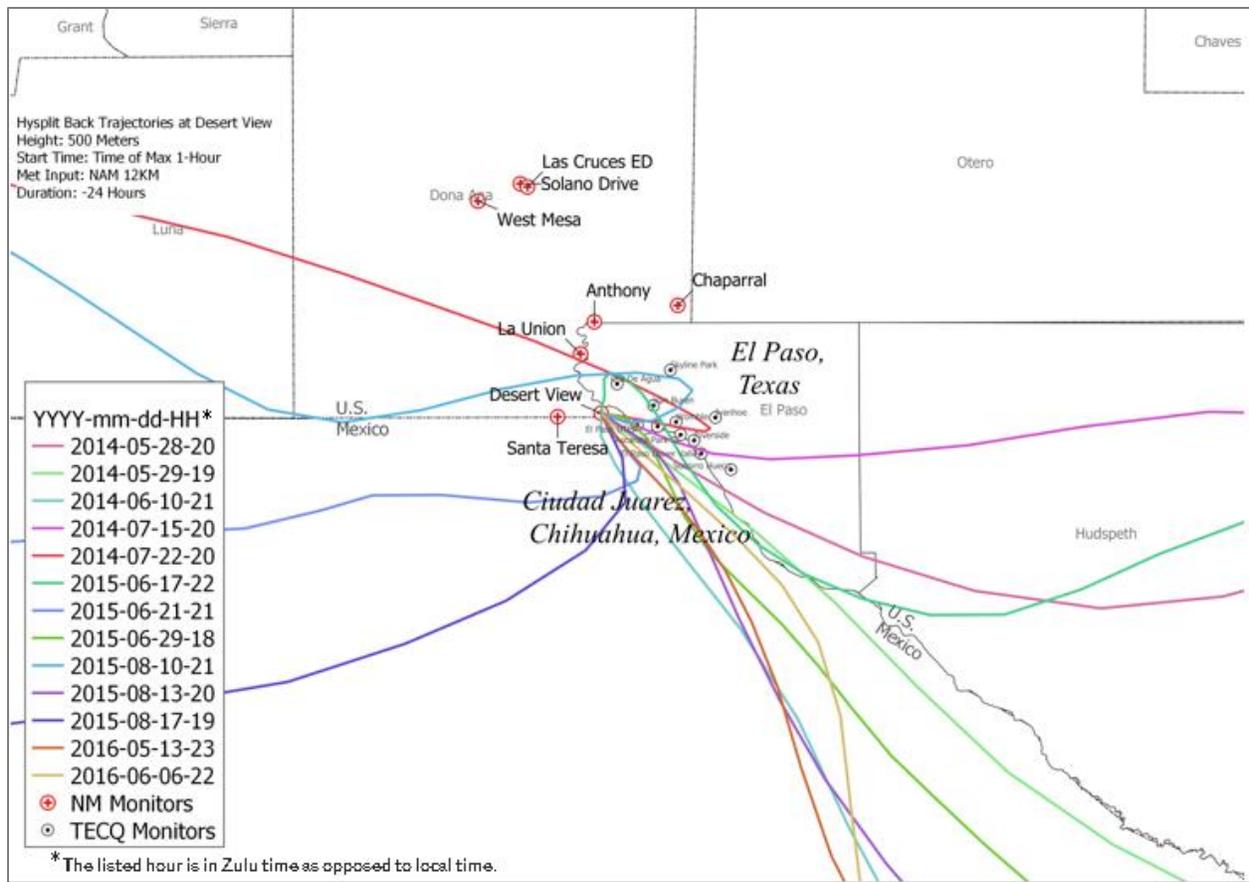


Figure 2: HYSPLIT Results at 500 m AGL from 13 Days in 2014 through 2016 that Exceeded the 2015 Eight-Hour Ozone NAAQS

Variation in Trajectories

The trajectories generated by the TCEQ are less easterly than those in the United States Environmental Protection Agency’s (EPA) “Doña Ana County, New Mexico Area Designations for the 2015 Ozone National Ambient Air Quality Standards Technical Support Document (TSD).” The TCEQ used more precise meteorological data, from the NAM at 12 km resolution, while the EPA used Eta Data Assimilation System (EDAS) data at 40 km resolution. Additionally, the TCEQ used more precise individualized start times for each trajectory, while the EPA used a single start time for all trajectories. These two more precise aspects of the methodology provide results with greater confidence in depicting actual conditions.

Conclusions

The HYSPLIT trajectories generated with more precise meteorological data and start times were most frequently from the southeast on the dates the Desert View monitor recorded eight-hour ozone concentrations greater than 70 ppb. By entering more individualized data about the specific circumstances at the times of high ozone at the Desert View monitor, these trajectories better represent the conditions contributing to the formation of ozone on the days on which exceedances were recorded. These exceedances appear to be more influenced by air parcels from the southeast and Mexico, rather than the east.

ATTACHMENT 3

COMPARATIVE DATA FOR SPECIFIED COUNTIES

Table 1: Comparative Data for Specified Counties

County Name and State	Number of Point Sources	Total Ozone Precursor (NO_x and VOC) Emissions, Tons per Year	2015 Population	Population Density per Square Mile	2014 VMT (million miles)	Number of County Residents Who Work	Number of County Residents Commuting to or within Counties with Violating Monitor(s)	Percentage Commuting to or within Counties with Violating Monitor(s)
El Paso, TX	10	32,303	835,593	825	5,956	308,236	5,692	2
Berks, PA	44	26,406	415,271	485	3,298	194,993	18,356	9
Northampton, PA	31	20,301	300,813	814	2,114	138,355	23,134	17