



CORPUS CHRISTI URBAN AIRSHED OZONE ADVANCE

ANNUAL REPORT

2021

CORPUS CHRISTI URBAN AIRSHED OZONE ADVANCE REPORT

YEAR 7 - 2021

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CORPUS CHRISTI URBAN AIRSHED OZONE ADVANCE REPORT

YEAR 7 – 2021

INTRODUCTION

On December 15, 2012, the Corpus Christi Air Quality Group (Group) submitted a letter of intent to the Environmental Protection Agency (EPA) to participate in an Ozone Advance Program. In May 2014, the Group submitted a Path Forward Letter (Appendix A) to the EPA initiating the Corpus Christi urban airshed's participation in an Ozone Advance Program with the EPA. This Path Forward Letter identified voluntary emission reduction activities that would be undertaken over a two-year period; scheduled for completion in May of 2016. In May of 2015, the Group submitted a report to the EPA on Year 1 Ozone Advance activities that took place from May 2014 – April 2015 (Appendix B). In July of 2016, the Group submitted a report to the EPA on Year 2 Ozone Advance activities that took place from May 2015 – April 2016 (Appendix C). In June of 2017, the Group submitted a report to the EPA on Year 3 activities that took place from May of 2016 – May of 2017 (Appendix D). In May 2018, the Group submitted a report to the EPA on Year 4 Ozone Advance activities that took place from May of 2017 – April 2018 (Appendix E). In May of 2019, the Group submitted a report to the EPA on Year 5 activities that took place from May of 2018 – April of 2019 (Appendix F). In May 2020, the Group submitted a report to the EPA on the remainder of Year 5 activities that took place from June 2019 – December 2019 (Appendix G). In May 2021, the Partnership (formally Group) submitted a report to the EPA on Year 6 activities that took place during the calendar year of 2020 (Appendix H). In addition to reporting on the activities committed to in the Path Forward Letter, each year's report included voluntary emission reduction activities accomplished above and beyond Path Forward Letter commitments as well as commitments that "looked forward" to future emission reduction commitments.

This report captures Year 7 activities that took place during the year of 2021 as well as "looking forward" commitments for 2022: Year 8.

Corpus Christi Air Quality Group Background

The Corpus Christi Air Quality Group (Group) was initially established as an ad-hoc task force in 1995 to address National Ambient Air Quality Standards (NAAQS) ozone attainment issues for the Corpus Christi airshed. From its inception in 1995 until 2020 the Group did not have a formalized structure, did not have dedicated funding or support staff, and was made up of volunteers including representatives from area municipal and county government, business and industry, the Port, local universities, public agencies, a regional planning organization, regional economic development corporations, the military, news media, and the public. Since 1995, the broad stakeholder representation within the Group worked collaboratively to design and deliver effective strategies to maintain NAAQS for ozone that are suitable for the Corpus Christi urban airshed. The Group met quarterly, and all meetings were open to the public. The Chair of the Group was funded

by contributions from the Port of Corpus Christi, the City of Corpus Christi, the Metropolitan Planning Organization, the Regional Transportation Authority, and Nueces County.

In December 2019, the Group changed its name to Coastal Bend Air Quality Partnership (Partnership) to more accurately reflect the inclusion of both Nueces and San Patricio counties in the airshed as well as the partnership efforts of the participants.

In April 2020, the Partnership agreed that in order to strategically serve the airshed into the future, it was necessary to transition to a formalized organization with a Board of Directors, a fulltime Executive Director, bylaws, obtaining 501 C3 approval and obtaining long-term dedicated funding.

The Partnership is in the transition process as of the writing of this report. An interim Board of Directors has been established, a strategic plan and bylaws have been approved, an application to the IRS for 501 C 3 approval has been submitted, funding in the form of 3-year commitments has been secured, an Executive Director is being recruited and efforts are taking place to seat a permanent Board. The Strategic Plan for the formalized organization is included in this report as *Attachment 1*.

Also included in this report as *Attachment 2* is a list of the Partnership Board and Transition Working Group and included as *Attachment 3* is a communication list for the General Partnership meeting attendees.

The Partnership continued to meet during the transition process to discuss, develop, and implement voluntary emission reduction programs and remains committed to Ozone Advance activities and reporting. Summaries of meetings held in June and October of 2021 are included in this report as *Attachment 4*.

Corpus Christi Urban Airshed Definition

The Corpus Christi urban airshed is made up of two adjoining counties in South Texas: Nueces County and San Patricio County. Nueces County and San Patricio County, (*Figure 1*) are defined by the EPA and the Texas Commission on Environmental Quality (TCEQ) as an urban airshed in which air emissions from sources in both counties interact to influence the level of ambient air pollution in the Corpus Christi community. Control of ambient air quality requires a strategy that considers sources of air emissions in both counties.

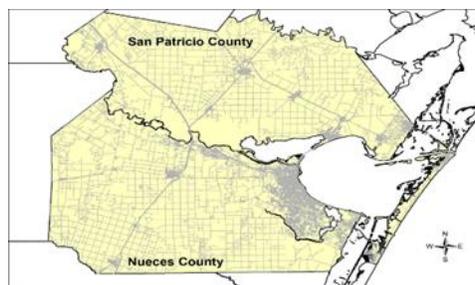


Figure 1: Map of Corpus Christi Urban Airshed

The region is a large, urbanized area with several industrial point sources of air emissions and a concentration of mobile sources. The two counties are home to the nation's third busiest deep-water port with access to the Gulf of Mexico and the Gulf Intracoastal Waterway, a large and growing industrial, manufacturing, and petrochemical complex, a major military base, oil and gas exploration activity, and a network of highways including an interstate highway system, railroads, and an airport that facilitate commerce and a thriving tourism industry.

Corpus Christi Urban Airshed Ozone Advance Goal

The goal of the Corpus Christi Urban Airshed participation in the Ozone Advance Program is to continue the area's successful history of maintaining healthy air quality and to encourage voluntary air emission reductions that maintain and protect Nueces County and San Patricio County attainment status of NAAQS for ozone.

Applicable Standards

The current NAAQS for ozone: the fourth highest daily maximum 8-hour average, averaged over the past three calendar years, must not exceed 70 ppb.

Corpus Christi Urban Airshed Ozone NAAQS Status and Trending

The TCEQ operates two Continuous Air Monitoring Stations (CAMS) in Corpus Christi: TCEQ CAMS 4, located at 902 Airport Road; and TCEQ CAMS 21, located at 9866 La Branch Street. TCEQ CAMS 4 and 21 are the regulatory monitors that determine Corpus Christi airshed's compliance with ozone NAAQS. (Figure 2)



Figure 2: Map of TCEQ regulatory air monitor sites

Currently, the airshed is in attainment of NAAQS for ozone at a 3-year average value using data from years 2019, 2020, and 2021 with CAMS 4 representing a 3-year average of 63 pp and CAMS 21 reflecting a 3-year average of 62 ppb as of year-end 2021. (Figure 3)

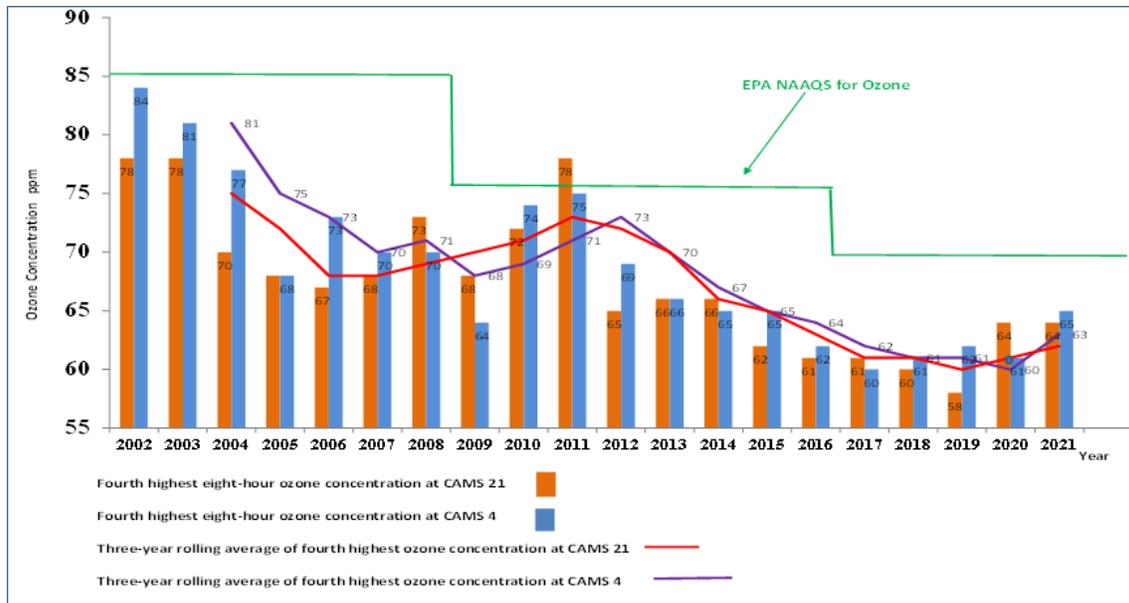


Figure 3: Corpus Christi Urban Airshed Ozone Design Trends at TCEQ regulatory monitors, CAMS 4 and CAMS 21

EMISSIONS REDUCTION ACTIVITIES PERFORMED in 2021 (YEAR 7)

Air Quality Education Programs

Path Forward for Air Quality Education and Briefings for 2021

The Partnership webpage and Facebook page will continue in 2021. Briefings and presentations about the importance of air quality and emission reduction recommendations will continue throughout the community in 2021. The local cost of non-attainment of ozone standards study will continue to be promoted in the community. When the Partnership is fully transitioned with the Board of Directors and Executive Director established, the distribution piece for the Regional Economic Development Corporations will be presented for adoption.

Air Quality Education Accomplishments in 2021

The Partnership Facebook page (facebook.com/ccairquality) reached approximately 104 people in 2021. During the same time period, the Partnership website (www.cctexas.com/planning-esi/environmental-strategic-initiatives-esi/cc-air-quality-group) had 543 visits and the Pollution Prevention Partnership Air Quality Website (outreach.tamucc.edu/p3/) experienced 1,032 visits in 2021.

Numerous other education efforts were also made by group stakeholder Pollution Prevention Partnership and are cited on page 6 of this report.

Air Quality Briefing Accomplishments in 2021

Briefings were provided to the Corpus Christi Caller-Times newspaper, television reporters, Nueces County Commissioners, San Patricio County Commissioners, Port of Corpus Christi Commissioners and City of Corpus Christi City Council. Briefings included information about current air quality issues and challenges, the importance of attaining air quality standards, the results of the local cost of non-attainment study, and recommendations for emission reduction activities.

Path Forward for Air Quality Education and Briefings for 2022

The Partnership webpage and Facebook page will continue in 2022. Briefings and presentations about the importance of air quality and emission reduction recommendations will continue throughout the community in 2022. The local cost of non-attainment of ozone standards study will continue to be promoted in the community.

Air Quality Curricula

Path Forward for Air Quality Curricula for Year 2021

Industry will meet to discuss funding air quality curricula in 2021.

Accomplishments for Air Quality Curricula in Year 2021

Classroom curricula was not delivered in 2021.

Monitoring and Research

Path Forward for Monitoring and Research for 2021

The City contractor anticipates new monitors on-line by the end of April 2021, to run through Ozone season.

Monitoring and Research Accomplishments in 2021

The City contractor provided ozone monitor research for three (3) airshed research monitors (CAMS 660, 686, and 659) that came on-line in July, 2021. The year-end 4th maximum 8-hour average for CAMS 660, 686, and 659 respectively was 52 ppb, 56 ppb, and 65 ppb for 2021. CAMS 659 experienced two (2) days when ozone levels exceeded the 8-hour standard. Research indicated that on these two days, winds were out of the north/northeast and that the airshed is more sensitive to increases in NO_x than VOCs.

Path Forward for Monitoring and Research in 2022

The City contractor will continue to record ozone and NO_x at the three original sites and add an additional site for 2022. The contractor will also analyze the 2020 emissions data and conduct a NO_x emissions inventory in 2023.

Clean Fleet

Path Forward for Clean Fleet for 2021

In 2021 The Pollution Prevention Partnership (P3) will continue to participate in the Coastal Bend Air Quality Partnership and assist with transition to a non-profit entity. P3

will also participate in other policy related forums, and meetings. P3 will present Ozone reduction strategies and education at conferences, health fairs, meetings, and workshops. The emissions testing programs will be promoted at these venues and implemented on site when possible, funding contingent.

Clean Fleet and P3 will continue our current affiliation with EPA SmartWay and increase efforts to recruit one or more local SmartWay partners. Partnerships with Texas Department of Transportation Drive Clean Across Texas, and The Port of Corpus Christi will continue. P3 will promote these partnerships and associated collateral material in person, on the web, and social media.

P3 will continue providing free voluntary emissions testing for private and public fleets and continue funding repairs for qualified private vehicles with pollution related mechanical issues as long as funding is available. The screening protocol will continue to use tailpipe gas analysis, gas cap pressure testing, and Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). AutoCheck will replace missing tire valve stem caps for all participants to reduce incidents of low tire pressure due to dirty air valves.

P3 will publish electric lawn equipment and greenscaping sections on the P3 website.

P3 will continue to look for funding sources to expand existing services or begin new programs such as an electric lawn equipment subsidy for gasoline engine exchange.

Clean Fleet Accomplishments 2021

With supplemental funding from The Port of Corpus Christ, Texas A&M University-Corpus Christi administers the Pollution Prevention Partnership (P3), Clean Fleet, and AutoCheck programs. These programs implement a multipoint strategy to reduce ozone through voluntary emissions testing of private and business vehicles, repair of private vehicles, reports to fleet managers, ozone action training and awareness, and distributions of tire gauges and literature from local, state, and federal air quality programs.

The AutoCheck Supplemental Environmental Program (SEP) administered by P3 screens for pollution issues by tailpipe gas analysis, gas cap pressure testing, and reading Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). Qualified vehicles are issued a voucher for repairs. AutoCheck also replaces missing tire valve stem caps for all participants to reduce incidents of low tire pressure due to dirty air valves. The repairs made by the AutoCheck SEP are performed with penalty monies from a Texas Commission on Environmental Quality enforcement action.

In Calendar year 2021, P3 held 45 vehicle emissions testing events where 343 vehicles were tested for bad gas caps, high emissions, and OBD-II codes. 14 non-evaporative repairs and 11 gas cap and evaporative control system repairs were made resulting in an estimated 1,693 lbs. of hydrocarbon (HC) emissions directly reduced annually. The

preventive OBD-II repairs contributed additional but unquantified reductions in HC, carbon monoxide (CO), and Nitrogen Oxides (NOx). P3 has begun testing scenarios in the EPA's Motor Vehicle Emission Simulator (MOVES) to estimate emission reductions from OBD-II repair. Detailed data sheets for emission testing events and emissions reductions are included in this report as Attachment 5.

P3 provided ozone-reduction strategies, education, tools, services, and clean air advocacy at 9 educational, health, and safety events. On an ozone action day, June 18, 2021, the P3 manager provided ozone reduction tips on a TV news interview. P3 manager supported the Coastal Bend Air Quality Partnership by serving as an interim board member.

P3 is an EPA SmartWay affiliate, Texas Department of Transportation Drive Clean Across Texas affiliate, and receives promotional and educational material from TCEQ's Take Care of Texas campaign. Information is distributed to drivers directly at events, through our web site (<https://www.tamucc.edu/research/research-engagement/p3>), and the Research Engagement Facebook account. The P3 and AutoCheck website received 1,032 pageviews in 2021.

Clean Fleet Path Forward for 2022

In 2022 The Pollution Prevention Partnership (P3) will continue support of the Coastal Bend Air Quality Partnership and assist with the transition to a permanent board. P3 will also participate in other related forums and meetings. P3 will present ozone reduction strategies and education at conferences, health fairs, meetings, and workshops. The emissions testing programs will be promoted at these venues and implemented on site when possible, funding contingent.

Clean Fleet and P3 will continue our current affiliation with EPA SmartWay and increase efforts to recruit one or more local SmartWay partner (s). We will continue partnerships with Texas Department of Transportation Drive Clean Across Texas, TCEQ Take Care of Texas, and The Port of Corpus Christi. P3 will promote these partnerships and associated collateral material in person, on the web, and social media.

P3 will continue providing free voluntary emissions testing for private and public fleets and continue funding repairs for qualified private vehicles with pollution related mechanical issues as long as funding is available. The screening protocol will continue to use tailpipe gas analysis, gas cap pressure testing, and Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). AutoCheck will distribute tire gauges and replace missing tire valve stem caps for all participants to reduce incidents of low tire pressure.

P3 will purchase a stock of common gas caps to replace malfunctioning caps in the field. This will increase the gas cap repair rate by reducing the number of unredeemed vouchers. New partnerships with a Corpus Christi Housing Authority affiliate and the Portland Chamber of Commerce will help expand testing. The purchase of a new hybrid

program vehicle will also help increase the number of events with plans to expand activity in San Patricio County.

Emissions modeling for the program will be improved using MOVES with guidance from the Texas A&M Transportation Institute and/or TCEQ.

P3 will continue to look for funding sources to expand existing services or begin new programs such as an electric lawn equipment subsidy for gasoline engine exchange.

Use of IR Cameras

Path Forward Plan for 2021

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Use of IR Camera Accomplishments 2021

Several stakeholders employed the use of IR cameras in 2021. A table capturing the overall use of IR cameras in addition to other volunteer activities is included on page 12 of this report.

Path Forward for Use of IR Cameras for 2022.

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Corpus Christi Army Depot (CCAD) Ozone Action Day Notifications

Path Forward Plan for 2021

CCAD will be replacing old paint booths which were equipped with dated pollution control technology. The new paint booths are coming online and in planning via NSR amendment application. DoD will be implementing non-chromate surface coatings with lower VOC content nationwide. DoD is testing and implementing toxic metal reductions (TMR) by replacing Chrome VI electroplating solutions with less toxic solutions. CCAD plans to continue to inform employees of ozone action days and emissions reduction recommendations and employ pollution prevention initiatives for Year 7.

CCAD Notifications and Accomplishments 2021

CCAD continued replacing old paint booths which were equipped with dated pollution control technology. DoD also continued to implement non-chromate surface coatings with lower VOC content nationwide. CCAD continued to inform employees of ozone action days.

Path Forward for Ozone Notification for CCAD for 2022

CCAD will continue replacing old paint booths which were equipped with dated pollution control technology. DoD will continue to implement non-chromate surface coatings with lower VOC content nationwide. Older vapor degreasers will be replaced with more efficient vapor degreasers. CCAD will construct new buildings utilized for industrial work space. This action will save electricity via upgraded HVAC and LED lighting systems. CCAD will continue to inform employees of ozone action days.

Operation of Public Use Compressed Natural Gas (CNG) Fueling Facilities

Path Forward Plan for 2021

The City will continue to operate the CNG fueling facility and promote public use of the facility in 2021. The Gas Department plans to conduct public outreach efforts promoting CNG fuel as a cleaner burning alternative to gasoline and diesel.

Public Use CNG Fueling Facilities Accomplishments 2021

The Gas Department gained 10 customers. The City will continue to operate the CNG fueling facility and promote public use of the facility in 2021. The Gas Department plans to conduct public outreach efforts promoting CNG fuel as a cleaner burning alternative to gasoline and diesel.

Path Forward for Public Use CNG Fueling Facilities for 2022

The Gas Department will continue in promoting CNG fuel for a cleaner environment.

Electric Vehicle Infrastructure

There are 9 public charging facilities for electric vehicles in the airshed. Sites include La Palmera, a major shopping mall, several vehicle dealerships, and area hotels.

City of Corpus Christi Purchase of CNG Vehicles

Path Forward Plan for 2021

The City of Corpus Christi plans to replace twenty (20) vehicles with CNG bi-fuel and dedicated vehicles.

City of Corpus Christi Purchase of CNG Vehicles Accomplishments 2021

Due to interruptions in the availability of CNG vehicles, the City did not receive any CNG vehicles.

Path Forward for City of Corpus Christi Purchase of CNG Vehicles for 2022

The City of Corpus Christi plans to replace ten (10) vehicles with CNG bi-fuel and dedicated vehicles.

RTA Purchase of CNG Vehicles

RTA Purchase of CNG Vehicles Accomplishments 2021

RTA did not purchase any new CNG or Electric vehicles in 2021.

MPO Assistance with Mobility Planning

Path Forward Plan for 2021

The MPO staff will continue to support transportation planning programs and research that seek to reduce transportation related air emissions. The MPO will update and modify the Air Quality section of the MPO website to enable visitors to the site to be able to link to air quality reports and conditions.

MPO Assistance with Mobility Planning Accomplishments 2021

The MPO participated in meetings of the Coastal Bend Air Quality Partnership to stay connected to their efforts related to voluntary air quality strategies. The MPO staff continued to scan air quality related articles, reports and presentations by various state and federal agencies to look for opportunities for local actions. The MPO lists the Corpus Christi Ozone Advance reports on its air quality webpage. The MPO supported regional planning to address mitigation of environmental and air quality impacts of transpiration in alignment of environmentally related performance measures.

Path Forward for Mobility Planning for 2022

MPO will link air quality forecasts on their website. The air quality section of their website will be upgraded and enable visitors to link to updated air quality reports and conditions. The MPO will continue to remain active with the Partnership, scan air quality related reports for local opportunities, and support regional planning to address mitigation of air quality impacts of transportation.

RTA Van Share and Community Shuttle Program

Path Forward Plan for 2021

The Partnership will continue to promote the RTA Van Share program.

Van Share and Community Shuttle Accomplishments 2021

The RTA VanShare Program provided 487,589 miles of service for 45,341 trips: removing thousands of vehicles from the road in 2021. The chart posted below reflects the Van Share program accomplishments for 2021.

2020 Vanpool				
Field	Average Weekday Schedule	Average Saturday Schedule	Average Sunday Schedule	Annual Total
Vehicles in Operation	14	6	6	
TOTAL ACTUAL VEHICLE MILES	1,611	643	617	487,589
TOTAL ACTUAL VEHICLE HOURS	29	11	10	8,680
SERVICES CONSUMED				
Total Monthly Ridership Unlinked Passenger Trips (UPT):	155	50	40	45,341
SERVICES OPERATED (DAYS)	262	52	52	366

RTA provided shuttle services to 762 riders over a total of 854 miles in 2021, removing hundreds of vehicles from the road.

SPECIAL MOVEMENT EVENT	# Passenger Trips	Miles	Hours	Date	Days
January-20					

Autonomous Shuttle	20	75	2.8	1/14/20	1
MLK March	375	70	9.03	1/20/20	1
SPECIAL MOVEMENT EVENT	# Passenger Trips	Miles	Hours	Date	Days
Autonomous Shuttle	15	79	4.33	1/21/20	1
Staging Vehicle for Rt 100 – The Surge	0	2	5.65	2/1/20	1
City of CC & Chamber Tour	71	122	6.66	2/4/20	1
City Manager Tour	24	24	1.92	2/5/20	1
Staging Vehicle for Rt 100 – The Surge	0	2	4	2/15/20	1
Staging Vehicle for Rt 100 – The Surge	0	3.5	3.75	2/29/20	1
CCIA Maintenance Facility	104	50	6.75	3/4/20	1
CCAD Scholarship Field Trip – Buc Commission	32	59	4.53	3/6/20	1
League of Women Voters	51	18	2.62	3/7/20	1
CCPD/SWAT Training	70	317.37	13.83	6/6/20	1
CCPD Anti-Theft Press Conference	0	32	8	11/19/20	1

Green Building Initiatives

Corpus Christi home builders *Leads* initiative for “green” building titled “Coastal Bend GreenBuilt”. The project includes a checklist and assigns a point value for each aspect of green initiatives built into a home. A copy of the checklist was provided in the Year 2 report (Appendix C). In 2021, over 50 certified Greenbuilt homes were built.

Port of Corpus Christi Initiatives

Path Forward for Port of Corpus Christi Initiatives for 2021

Through the Port’s Strategic Plan, the Port has developed a Clean Fleet Program which is in the process of being implemented. Seven plug-in hybrid electric vehicles / hybrid electric vehicles have been ordered to replace the Administration pool vehicles. All Port-owned vehicles will be replaced with low emissions vehicles by 2023. The Port will complete its 2020 emissions inventory. The Port will continue to provide financial support for the Pollution Prevention Partnership and the Coastal Bend Air Quality Partnership. The 2020 emissions inventory will be completed, and an emission reduction study and pilot program will support the Port’s planning effort to develop emission reduction programs for emissions control strategies. The Port will purchase seven (7) air monitors capable of continuously monitoring PM 10 and PM 2.5 to replace a tenant funded system at the Bulk Terminal.

Port of Corpus Christi Accomplishments 2021

The Port continued to enforce its anti-idling policy through the Drive Cam system which identifies idling non-conformances in all Port-owned vehicles. A graph of idling non-conformances in each department was sent out to all employees to highlight departments that need to improve compliance.

As part of the Clean Fleet Program, the PCCA purchased 6 hybrid vehicles to reduce emissions from gasoline engines. Two of the vehicles purchased were plug-in hybrid vehicles, which offer an even more significant reduction in vehicle emissions. PCCA also purchased an electric vehicle charging station to be installed at the Port's Executive Administration Building.

PCCA continued to work with the Texas A&M University-Corpus Christi Pollution Prevention Partnership (PPP) to monitor emissions from the Port's vehicle fleet by testing all Port vehicles for elevated emissions. PCCA also worked with the PPP to host a public emissions monitoring event at Whataburger Stadium. Significant funding was also provided by the Port for PPP activities, and financial support for the transition of the Coastal Bend Air Quality Partnership.

The Port completed a 2020 Air Emissions Inventory and presented the findings at the November 16th Port Commission Meeting. An emissions inventory is completed by the Port every three years and compiles all air emissions resulting from operations at the Port. The timing of the completion of this emission inventory aligns with the TCEQ's preparation of point source and area mobile emissions. Therefore, the Port's consultant provides a regional emission inventory summary. One additional component in the 2020 emission inventory is inclusion of the emissions from lightering activities that occur in the Gulf of Mexico. This portion of the emission inventory is still underway and expected to be completed in the second quarter of 2022.

Path Forward for Port of Corpus Christi Initiatives 2022

The Port will continue the implementation of the Clean Fleet Program, five hybrid electric vehicles have been requested to replace vehicles in the current fleet. The Clean Fleet Program is planned to be fully implemented by 2025. The Port is also Implementing a Clean Equipment Program which will replace gasoline-powered equipment with electric and CNG-powered equipment as alternatives become available.

PCCA will continue to work with the Texas A&M University-Corpus Christi Pollution Prevention Partnership (PPP) to monitor emissions from the Port's vehicle fleet and coordinate public monitoring events. The Port will continue to provide financial support for the Pollution Prevention Partnership and the Coastal Bend Air Quality Partnership.

Stakeholder Initiatives Summary

The following table is a summary of the frequently employed voluntary emission reduction initiatives undertaken by area stakeholders. Please note that the following table summarizes voluntary emission reduction activities undertaken by several industrial and agency stakeholders. Many respondents noted individual activities not captured in the table. Individual responses citing emission reduction activities can be found in *Attachment 6* of this report.

Activity	Cheniere (*)	Flint Hills Resources (*)	Valero Refining (*)	Citgo Refining	Equistar Chemicals (*)	MPO (*)	Texas A&M Corpus Christi (*)	Port of Corpus Christi (*)	OxyChem (*)	Nueces County (*)	City of Corpus Christi (*)	NuStar (*)	City of Portland
Register to receive ozone elevation notifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Communicate emission tips to employees and vendors	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Provide ozone education to personnel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Promote car-pooling	✓			✓		✓	✓	✓	✓	✓	✓		
Anti idle policy		✓	✓	✓			✓	✓	✓	✓	✓		✓
Postpone delivery activities				✓	✓		✓	✓		✓		✓	
Require low VOC materials		✓	✓	✓			✓	✓	✓	✓		✓	
Require scrubbers		✓	✓	✓	✓				✓				
Recommend alternative or mass transit in fence-line	✓		✓				✓			✓			
Alternative fuel fleet							✓	✓	✓	✓	✓		

Activity	Cheniere (*)	Flint Hills Resources (*)	Valero Refining (*)	Citgo Refining	Equistar Chemicals (*)	MPO (*)	Texas A&M Corpus Christi (*)	Port of Corpus Christi (*)	OxyChem (*)	Nueces County (*)	City of Corpus Christi (*)	NuStar (*)	City of Portland
Emissions test fleet							✓	✓		✓	✓		
Replace older fleet			✓	✓				✓		✓	✓		✓
Repower or replace older engines	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓
Filter traps and DOCs on diesel fleet									✓	✓			
Use low sulfur diesel	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓
Flare reduction	✓	✓	✓	✓	✓				✓				
Produce low sulfur diesel		✓	✓	✓									
Utilization of IR cameras for inspections	✓	✓	✓	✓	✓					✓			
Routine inspections for fugitive emissions	✓	✓	✓	✓	✓			✓	✓	✓			
Low NOx burners		✓	✓	✓	✓				✓	✓			
Flue gas recirculation		✓		✓					✓				

Activity	Cheniere (*)	Flint Hills Resources (*)	Valero Refining (*)	Citgo Refining	Equistar Chemicals (*)	MPO (*)	Texas A&M Corpus Christi (*)	Port of Corpus Christi (*)	OxyChem (*)	Nueces County (*)	City of Corpus Christi (*)	NuStar (*)	City of Portland
Vapor recovery	✓	✓	✓	✓	✓				✓				
Low emitting tank roofs		✓	✓	✓	✓				✓				
Thermal Oxidizer	✓	✓	✓						✓				
Fired source alarm controls			✓		✓								
Routine storage tank inspections	✓	✓	✓	✓	✓				✓	✓			
Flare gas analyzer	✓	✓	✓	✓	✓				✓				
Energy reduction programs			✓	✓	✓		✓	✓		✓			
Enclosed materials storage and conveyors								✓					

*Numerous additional voluntary emission reduction practices take place at these facilities and are described in their attached letters (Attachment 7)

ATTACHMENT 1

**COASTAL BEND AIR QUALITY
PARTNERSHIP
STRATEGIC PLAN**

Coastal Bend Air Quality Partnership Strategic Plan 2021 – 2023

Background

It is essential that the Coastal Bend Air Quality Partnership (Partnership) transition from an informal and unstructured volunteer group to a full-time, formal organization to strategically serve the future of the Coastal Bend's air quality and quality of life. New economic development has created the opportunity—and imperative—for regional partners to define and strive for a permanent, full - time air quality organization. The mission of the Partnership is to work daily to ensure that the region can rely on having a long-term future of the healthy air quality and economy we enjoy today.

Vision Statement

The Partnership is a dependable and long-term, research, advisory, and action-oriented organization that the Coastal Bend community can rely on to protect its current and future healthy air quality and quality of life. Via mutually beneficial relationships with stakeholders, the Partnership is a regional and national success for voluntary reductions of air emissions and protection of air quality.

Mission Statement

The mission of the Partnership is to protect the region's healthy air quality and inspire all emission sources to strive for performance targets beyond general compliance through research, education, and the development and distribution of guidance documents, recommendations, tools, and protocols for emission producing activities. The Partnership believes that everyone wants to live, work and play in a community with healthy air. The Partnership believes that with its leadership and commitment to protecting healthy air quality, the work of the Partnership and its stakeholders will provide the region with the tools and resources it needs to maintain and protect the future of its healthy air.

Strategic Goals

- 1) Advance regional dialogues about the effects of air quality on health, environment, economy, and overall quality of life.
- 2) Educate and advise industry, government, small businesses, and the public on air quality issues.
- 3) Promote voluntary air quality improvement measures and emission reducing activities beyond legal compliance.
- 4) Propose, promote, and implement programs for monitoring air quality.
- 5) Maintain attainment status for federally regulated air pollutants.

Objectives (2021-2023)

Objective accomplished in 2020 – Proposing financial commitments to support annual operating budget of \$131,200 for 2021 – 2023

Hire a full-time Executive Director by end Q1 2021
Establish non-profit status by the end of 2021

- A. Secure 50% of total annual operating budget in grant funds and remaining 50% of total annual operating budget in support from existing and new contributors for years 2024 - 2026 by end of 2022.
- B. Increase grant revenues by 10 % annually beginning in 2023
- C. Develop, adopt, and implement a Clean Air Action Plan by the end of 2022 to protect air quality.
- D. Commission a Nueces and San Patricio county air emissions inventory for ozone precursors and criteria pollutants to be conducted by the end of 2022.
- E. Deploy at least two new air monitors for research purposes by the end of 2023.

ATTACHMENT 2

**COASTAL BEND AIR QUALITY
PARTNERSHIP
INTERIM BOARD OF DIRECTORS AND
TRANSITION WORKING GROUP**

**COASTAL BEND AIR QUALITY PARTNERSHIP
INTERIM BOARD OF DIRECTORS AND TRANSITION WORKING GROUP**

NAME	POSITION	AFFILIATION
Sarah Garza	Interim Board President	Port of Corpus Christi
Trent Thigen	Interim Board Vice-President	Pollution Prevention Partnership, Texas A&M University-Corpus Christi
Sharon Bailey Murphy	Interim Board Secretary	City of Corpus Christi
Bob Paulison	Transition Work Group	Port Industries of Corpus Christi
Darcy Schroeder	Transition Work Group	Valero Refining
Sherman Hampton	Transition Work Group	Exxon Mobil
Glenda Swirec	Transition Work Group	Moda Midstream/Enbridge
Robert MacDonald	Transition Work Group	Metropolitan Planning Organization
Errol Summerlin	Transition Work Group	Coastal Alliance to Protect our Environment
Isabelle Rivero	Transition Work Group	Exxon Mobil

ATTACHMENT 3

**COASTAL BEND AIR QUALITY
PARTNERSHIP
COMMUNICATION LIST**

NAME	AFFILIATION
Clair Garza	Valero Refining
Aron Baggett	Oxy
Curtis Taylor	Flint Hills Resources
Corpus Christi Caller Times	Media
Leah Olivarri	Community Communications
Howard Fels	AEP
Bob Trebatoski	Equistar
Joe Almarez	Valero Refining
Bob Paulison	Port Industries
Denise Rogers	Trafigura
Sharon Montez	Regional Transportation Authority
Glenda Swierc	ModaMidstream
Greg Bezdeck	Markwest
Sharon Lewis	City of Corpus Christi
Roger Tennapel	Flint Hills Resources
Ginny Cross	United Corpus Christi Chamber of Commerce
John LaRue	United Corpus Christi Chamber of Commerce
Nelda Olivo	Port of Corpus Christi
Sarah Garza	Port of Corpus Christi
Susan Clewis	Texas Commission on Environmental Quality
Christopher Amy	TxDOT
Dana Perez	Flint Hills Resources
Colleen Johnson	Civil and Environmental Consultants
Mari Cuevas	Corpus Christi Community Council
Carrie Meyer	Corpus Christi resident
David Harvey	Lyondell
Kelly Ruble	Texas Commission on Environmental Quality
Danielle Converse	Port of Corpus Christi
Craig Eckberg	NRG
Meagan Marguard	Valero Refining
Iain Vasey	Corpus Christi Regional Economic Development Corp
Rosie Collin	Port of Corpus Christi
Molly Edens	NuStar
Trent Thigpen	Pollution Prevention Partnership
Scott Peters	Lyondell
Matt Nerren	Corpus Christi Army Depot
Maria Garcia	Corpus Christi Army Depot
Alfredo Diaz	Flint Hills Resources
Bea Vasquez	Flint Hills Resources
Darcy Schroeder	Valero Refining
Kevin Kenall	Citgo Refining
Errol Summerlin	San Patricio County Citizen

Rose Cornelius Crawford	Citizens Alliance
Sean Strawbridge	Port of Corpus Christi
Rev. Adam Carrington	Citizens Alliance
Snapper Armstrong	Stack Test
Gretchen Arnold	Chair
Bob Peneda	Magellan
Ramona Josefeczyk	Port of Corpus Christi
Beatriz Riverra	Port of Corpus Christi
Beth Becerra	Exxon Moble
Colette Walls	Exxon Moble
Catherine Barnard	Environmental Consulting
Lauren Wenner	NRG
A J Hansborough	Trinity Consultants
Isabelle Palacios	Voestalpine
Jeremy Landers	media
Jessica Muennink	Cheniere
Carrie Paige	EPA
Ruben Herrera	Oxy
Tammy Embrey	City of Corpus Christi
Daniel Carazales	MPO
MPO	MPO
Miyoung Squire	Consultant
Melissa Zamora	Community
Adrianna Escamilla	Port of Corpus Christi
Ashleigh Holden	Community
Steve Coffman	Chemours
Jennifer Lira	Citgo Refining
Robert MacDonald	MPO
Andrew Frazone	Oxy
Matt Garcia	TxOGA
Randy Pitre	EPA
Cathy Skurow	City of Portand
Kirsten Crow	media
Austin Taylor	Moda Midstream
Randy Wright	City of Portland
Brent Moore	HDR Engineering
Jane Gimler	Builders and Contractors
Zulema Garcia	Citgo Refining
Veronica Fuentes	Citgo Refining
Isabele Rivero	Exxonmobile
Claire Lindsey	Flint Hills Resources
Aimee Almaraz	Valero Refining
Jim Lee	Community

Beatrice Rivera	Port of Corpus Christi
Robert Schulz	Port of Corpus Christi
Nicole Hailey	Magellan
Ashley McMullan	Weston Solutions
Brad White	Weston Solutions
MacKenzie Ward	Port of Corpus Christi
Frank Salinas	Elementis
Craig Kondoff	Cheniére
Adrian Araiza	Citgo Refining
Leslye Cavazos	Port of Corpus Christi

ATTACHMENT 4

**COASTAL BEND AIR QUALITY PARTNERSHIP
MEETING NOTES**

Coastal Bend Air Quality Partnership Meeting Notes
Coastal Bend Air Quality Partnership Meeting

June 22, 2021

The meeting was held virtually via WebEx and hosted by Pollution Prevention Partnership, Texas A&M University-Corpus Christi.

Present

Gretchen Arnold; Interim Executive Director
Trent Thigpen; WebEx Administrator, Interim Vice-President
Sarah Garza; POCCA, Interim President
Sharon Bailey Murphy, Interim Secretary
Jose Araiza, Citgo
Jackson Seymore, TAMUCC
Bea Rivera, POCCA
Bob Paulison, Port Industries
Glenda Swierc, Moda Midstream
Craig Kondoff, Cheniere
Isabel Palacios, Voestalpine
Curtis Taylo, FHR
David Edge, NuStar
Meagan Marquard, Valero
Melissa Gamboa, Citgo
Melissa Mason, Citgo
McKenzie Ward, POCCA
Mita Cummings, FHR
Joseph Felix, TAMUCC
Ashby McMullan, Weston Solutions
Cathy Skurow, Portland, TX
Molly Martin, NuStar
Tammy Embrey, City of Corpus Christi
Brandon Maxwell, ExxonMobil
Matt Garcia, TXOGA
Rob MacDonald, MPO
Randy Wright, Portland, TX
Colleen Johnson, Civil and Environmental Consultant
Andrew Franzone, Oxy
Jennifer Lira, Citgo
Claire Lindsey, FHR
Nelda Olivo, POCCA
Roger TenNaple, FHR

* There were meeting attendees that telephoned into the meeting and therefore their names were not recorded in the WebEx document. The attendee list will be updated as needed.

(Port of Corpus Christi Authority; POCCA, Metropolitan Planning Organization; MPO, Flint Hills Resources; FHR, Texas Commission on Environmental Quality; TCEQ, Environmental Protection Agency; EPA.)

Gretchen began the meeting at 3:05 pm

Meeting Notes

Ozone Season 2020/2021 Update

- Gretchen presented an ozone season update to the group. The year 2020 closed with a three-year rolling average of 61 ppb for ozone at both CAMS 4 and CAMS 21. In order for the Corpus Christi urban airshed to remain in attainment of ozone standards at the end of year 2021, CAMS 4 must experience a 4th high ozone level of less than 86 ppb and CAMS 21 must experience a 4th high ozone level of less than 87 ppb in 2021.
- Gretchen reviewed with the group that the previous week (June 15, 17 and 18) experienced elevated levels of ozone with Friday, June 18 being an ozone action day called by TCEQ; the first called ozone action day the airshed has had in several years. The elevated levels of ozone that occurred on the 15th, 17th, and 18th of June represented the first, second, and third highest ozone readings for the year at both CAMS4 and CAMS 21 monitors and elevated the current 4th high value at both CAMS 4 and CAMS 21 by 4 ppb.
- Gretchen shared with the group that the past week's event demonstrated that just few elevated days can make a significant difference in narrowing our margin for attainment. Gretchen went on to share that Partnership partners made a significant difference in getting the word out and educating the community on the June 18 ozone action day. Corpus Christi LEPC partner had set up ozone action day calls and tips to go out on their reverse alert system. All media and large areas of the community were immediately notified via reverse alert early on June 17 that the following day would be an ozone action day and were provided with useful information on what to do and what to refrain from doing. Partner Trent Thigpen provided informative media interviews on the impact of vehicles and vehicle maintenance and fueling on ozone action days. Gretchen reminded the group to stay vigilant and on hot, still days – take ozone action.

Coastal Bend Air Quality Partnership Transition Update

- Sarah Garza: CBAQP Interim Board President, presented an update to the group on the status of the transition to a full-time organization. Sarah reviewed the transition efforts that have taken place over the last several months. She shared that the creation, development and approval of bylaws took an extended period of time. In August of 2020, legal council advised the transition group to define the

Permanent Board of directors and election process first before developing the remainder of the bylaws. Permanent board review and discussions took place until November of 2020 at which time a 5 member Permanent Board was defined and approved. Subsequent review and discussion directed the Interim Board to revisit the Permanent Board make-up and in late January 2021, a 10 member Permanent Board including 1 non-voting ex-officio was approved by the Interim Board. The 10 member board includes 1 representative from the City of Corpus Christi, 1 representative from the City of Portland, 1 representative from Nueces County, 1 representative from San Patricio County, 3 representatives from Business and Industry from both Nueces and San Patricio counties, 1 representative from the Port, 1 representative from the Environmental community and 1 representative ex-officio from academia/ medical. In February, draft bylaws that included the Permanent Board definition was circulated for discussion among the transition group. Discussions and edits were performed on the bylaws throughout March and April. On May 21, 2021 the bylaws were approved. The Certification of Non-Profit Formation has been filed and registered with the Texas Secretary of State. Sarah reviewed fundraising efforts that have taken place. Nueces County committed to \$25,000 after a presentation and ask for \$15,000, the City of Corpus Christi has developed an MOU in the amount of \$15,000 that is awaiting City Council approval, the Port of Corpus Christi has provided \$45,000, San Patricio County has provided \$5,000, the RTA has provided \$5,000, and the MPO will provide \$4,000. Sarah stated that the transition group is still working to fund an operating budget of \$130,000 annually and the search remains short of the funding needed to move forward to hire an Executive Director and seat a Permanent Board. Sarah encouraged the group to reach out to her if they are able to provide financial support. Sarah stated that an upcoming task to continue the transition effort will be to establish a nomination committee that will provide a slate of nominees for Permanent Board seats: 2 seats for Business and Industry representatives, 1 seat for a Community representative and 1 seat for a ex-officio academia/health representative. Sarah encouraged the group to reach out to her if they wished to serve on the nomination committee. The make-up of the 5 member nomination committee will go before the Interim Board for approval. Another upcoming task will be to approach sectors that are to appoint a seat (City, County, Port, Port Industries) and request their appointment to the Permanent Board. Once the Permanent Board individuals are appointed and slate of nominees approved and voted in, the Permanent Board will hold a first meeting and begin leading the organization. Sarah recognized the transition working group for their hard work and engagement.

Research Monitors Update

- Gretchen introduced the agenda item by introducing Sharon Bailey Murphy and reminding the group that two legislative sessions ago, funding for the research monitors was vetoed and the airshed asset of research monitors was terminated. Through Sharon's and Tammy Embrey's efforts in addition to Partner efforts to reach out to legislative contacts and provide briefings on the value of the monitors,

funding for research monitors in the airshed was restored to the airshed. Sharon reminded the group that the veto also terminated legislative funding to the airshed for the AutoCheck vehicle emissions reductions program which has not been restored. Currently the Port of Corpus Christ has funded the continuation of the AutoCheck program. Sharon stated that 3 new research monitors have been installed through legislative funding; Holly Road monitor which measures for ozone, NOx, and weather data, Aransas Pass monitor which measures for ozone and weather data and Odem monitor which measures for ozone and weather data. Sharon introduced Jackson Seymor, a graduate research assistant in environmental chemistry at Texas A&M University-Corpus Christi. Jackson works with Dr. Felix at Texas A&M University-Corpus Christi. Jackson is overseeing the monitors, pulls the data from the monitors weekly, and performs analysis through wind and pollutant pattern roses coupled with the monitor data. Jackson provided the group background information on how ozone is formed, the non-linear formation and evaluation of ozone trends, and importance of having research monitors and analyzing their data. He stated that with the airshed's robust growth, the area needs to stay on top of ozone information and research monitoring. He went on to present information that showed that the Corpus Christi Urban Airshed is NOx sensitive and said that with the research monitors and analysis, the airshed can get a better handle on ozone formation and control strategies. Additional monitors that Jackson works with are low cost, solar powered monitors in the Ingleside and Gregory area. The monitors cost about \$5,000 each and measure ozone in real time; transferring the information to an on-line database.

Vehicle Emissions Testing Opportunities

- Trent Thigpen with the AutoCheck vehicle emissions testing program provided the group an update on upcoming vehicle emissions testing events that measure the emissions from vehicles of the general public and if found to be polluting, qualifying vehicles can be eligible for repair vouchers. He also informed the group that the program can test and may resolve issues with vehicles that have check engine lights on. The program also provides Clean Fleet testing of fleet vehicles for organizations and companies, but the Clean Fleet program does not provide repair vouchers for eligible polluting vehicles like the AutoCheck program does. Trent took the group through the AutoCheck website that provides information on upcoming testing events as well as a form to request an AutoCheck event to be held at an organization or community event. Gretchen reminded the group that hosting an AutoCheck event at a worksite is a no-cost way for a Partner to make a difference in urban airshed air quality. Gretchen also reminded the group that funds for repair vouchers are made possible through the TCEQ SEP programs for environmental penalties and that should a Partner find themselves in a situation where a TCEQ penalty is being worked through, penalty funds can be directed to the AutoCheck program.

Meeting closed at 4:00 pm

Coastal Bend Air Quality Partnership Meeting Notes Coastal Bend Air Quality Partnership Meeting

October 25, 2021

The meeting was held virtual meeting via Zoom at 4:00pm.

Present:

Trent Thigpen
Gretchen Arnold
Sarah Garza
Sharon Bailey Murphy
Randy Wright
Adrian Araiza
Andrew Franzone
Aron Bagget
Ashby McMullan
Beth Becerra
Craig Kondoff
Darcy Schroeder
Glenda Swierc
Jane Gimler
Kirsten Crow
Kelly Ruble
Matt Garcia
McKenzie Ward
Roger Tennapple
Robert Schulz
Taylor (?)
Wayne Rivera
Sherman Hampton
Frank Solis

Ozone season 2021/2022 Update

- Gretchen reviewed the ozone data to date for 2021 as of October 22, 2021. She reminded the group that there have been elevated levels of ozone in October in the past and that this year saw elevated ozone levels on October 6 and 7 that pushed up the value of the 4th highest 8 – hour average of ozone for 2021. To date, the 4th highest 8 – hour average of ozone in 2021 at CAMS 4 is 65 ppb and at CAMS 21 is 64 ppb.
- If CAMS 4 and CAMS 21 do not experience any more ozone elevations in 2021, CAMS 4 must experience a 4th highest 8 – hour average of ozone less than 83 ppb and CAMS 21 must experience a 4th highest 8 – hour average of ozone less than 82 ppb in 2022 in order to remain in attainment of ozone standards in 2022.

Gretchen committed to send out an update to the group if there are any ozone elevations for the remainder of 2021.

- A question was asked about what the area's 4th highest 8 – hour ozone average was for 2021 prior to the October 6 and 7 ozone elevation event.
- Gretchen committed to go back and look. Gretchen was unable to identify what the 4th highest 8 – hour ozone average was on October 5 with an online search. TCEQ data on-line only reflects the ozone averages over the year and not day to day. Looking at available data, CAMS 4 saw an 8-hour ozone average of 67 ppb on October 6 and 65 ppb on October 7; two of CAMS 4 4th highest ozone averages for 2021. CAMS 21 saw an 8-hour average of 72 ppb on October 6 and 66 ppb on October 7; two of CAMS 21 4th highest ozone averages for 2021. An ozone update distributed on September 16, 2021 reflected a 4th highest 8 – hour ozone average at both CAMS 4 and CAMS 21 of 60 ppb.
- A question was asked if the group would be expanding its efforts and attention into other air pollutants such as VOCs, PM, benzene, etc. Gretchen replied that the group focused exclusively on ozone in the past because ozone was the only criteria or regulated pollutant that this airshed was in danger of violating EPA standards. Gretchen stated that an organization working to address overall air quality with multiple pollutant efforts would require a full-time presence and effort in the airshed. The volunteer and part-time structure of the group in the past did not have the capacity or the resources to broaden their effort beyond ozone. Gretchen stated that the transition into a full-time organization dedicated to air quality provided an opportunity for the airshed to have an organization that looks at overall air quality.

Coastal Bend Air Quality Partnership Transition Update

- Sarah Garza; President of the Coastal Bend Air Quality Partnership brought the group an update on the transition process.
- Sarah began by thanking the Board; Trent Thigpen and Sharon Bailey Murphy for their work. She also thanked the transition group for their work and input in the transition process. Sarah informed the group that bylaws have been passed and the Certificate of Formation has been filed with and approved by the Texas Secretary of State.
- An application package to be submitted to the IRS for 501 C 3 approval has been drafted and is anticipated to be submitted to attorney Richard Leshin for submittal to the IRS within the next week or so.
- The permanent Board structure was reviewed. The permanent Board is comprised of three business and industry seats, one seat for City of Corpus Christi, one seat for City of Portland, one seat for Nueces County, one seat for San Patricio County,

one seat for Community, one seat for the Port of Corpus Christi, and one ex-officio non-voting seat for Academia/Health. The City, County, and Port seats are direct appointments. One business and industry seat will be appointed by Port Industries and the remaining two seats will be presented in a slate by a nomination committee. The nomination committee will also include the Community and Academia/Health seats in their slate of nominees. The nominating committee has been approved and it is projected that they will present their slate of nominees by the end of the year.

- The job description for the Executive Director was developed and the job has been posted through Indeed, LinkedIn, AWMA and the air quality group. It is anticipated that the posting will close in about a week and interviews will take place in December. An interview panel is currently being established. Sarah shared that she and Gretchen met with the EPA Ozone Advance leads and they were very excited about the work being done in our airshed and the transition of the group.
- The overall transition process has had some delays in the overall timeline. Securing committed funding into the future was necessary in order to begin the remaining tasks and securing dedicated longterm funding required a significant amount of time and effort. Sarah stated that to date, funding of approximately \$200,000 a year has been secured and she thanked the supporters that committed to the organization; Nueces County - \$25,000 a year for three years, City of Corpus Christi - \$25,000 a year for three years, Port of Corpus Christi \$90,000 a year for three years and \$45,000 last year, RTA - \$5,000, MPO \$4,000, San Patricio County - \$5,000 and Port Industries -\$60,000 a year for three years. Sarah informed the group that Gretchen is still working with other entities to commit to supporting the organization.
- Next steps. Gretchen will remain with the organization to transition in the new Executive Director. The overall group will continue to be a part of the organization. Quarterly update meetings will continue, and the group will continue to participate in Ozone Advance. Once the Executive Director is brought in and the permanent Board seated, work will begin on the seeing through the strategic plan to include developing an action plan for the organization.
- Sarah asked for questions and there were none.

ATTACHMENT 5

CLEAN FLEET EVENT SUMMARY AND EMISSIONS REDUCTIONS DATA

Event Information				Vehicle Count			Voucher Issues			Fleet Issues			Vehicles	
Date	Event	Location	Time	Private	Fleet	Total	EVAP	Tailpipe	DTC	EVAP	Tailpipe	DTC	Dirty	Clean
4/17/2021	Autocheck GC Health Fair	Garcia Center	9:00 AM	6	0	6	0	0	0	0	0	0	0	6
5/13/2021	AutoCheck	TAMU-CC Island Dr.	10:00 AM	3	0	3	1	0	1	0	0	0	2	1
5/28/2021	AutoCheck	TAMU-CC Island Dr.	11:00 AM	1	0	1	0	0	0	0	0	0	0	1
6/10/2021	Autocheck	TAMU-CC Island Dr.	10:00 AM	9	0	9	2	0	0	0	0	0	2	7
6/23/2021	Autocheck	TAMU-CC Island Dr.	10:00 AM	2	0	2	1	0	0	0	0	0	1	1
6/27/2021	Autocheck	FUMC Shoreline	8:30 AM	10	0	10	0	0	1	0	0	0	1	9
7/13/2021	Health Fair	Tuloso-Midway Middle School	4:00 PM	4	0	4	0	0	0	0	0	0	0	4
7/24/2021	Autocheck	FUMC Portland	9:00 AM	11	0	11	0	0	0	0	0	0	0	11
7/28/2021	Autocheck	Rising Tide Ministries	10:00 AM	22	0	22	6	0	5	0	0	0	9	13
7/29/2021	Backpack Give Away	Garcia Center	1:00 PM	14	0	14	3	0	1	0	0	0	4	10
7/30/2021	Backpack Giveaway	Garcia Center	1:00 PM	8	0	8	3	0	0	0	0	0	3	5

Event Information				Vehicle Count			Voucher Issues			Fleet Issues			Vehicles	
Date	Event	Location	Time	Private	Fleet	Total	EVAP	Tailpipe	DTC	EVAP	Tailpipe	DTC	Dirty	Clean
12/8/2021	AutoCheck	Whataburger Field	10:00 AM	9	0	9	2	0	1	0	0	0	2	7
12/14/2021	AutoCheck	TAMU-CC Island Dr.	10:00 AM	5	0	5	2	0	0	0	0	0	2	3

Totals
Events
45

Total Vehicle Count			Total Voucher Issues			Total Fleet Issues			Vehicles	
Private	Fleet	Total	EVAP	Tailpipe	DTC	EVAP	Repairs	"Dirty"	"Clean"	
217	126	343	37	0	20	3	9	61	282	

Post Repair Summary Report

Invoice Date	V#	DTC Codes corrected	Repairs	Diagnostic	DTC	EVAP	Pipe
1/7/2021	744	P0171 System Too Lean (Bank 1)	Fuel Injector Cleaning, Mass Air Flow Sensor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1/11/2021	745	P0420 Catalyst System Efficiency Below Threshold (Bank 1), P0430 Catalyst System Efficiency Below Threshold (Bank 2)	Catalytic Converter Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1/28/2021	735	P0420 Catalyst System Efficiency Below Threshold (Bank 1)	Catalytic Converter Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2/12/2021	768	P0135 O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1)	Fuel Injector Cleaning, O2 Sensor Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3/10/2021	763	P0135 O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1), P0141 O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2), P0155 O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1), P0161 O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 2), P0403 Exhaust Gas Recirculation Circuit Malfunction, P0443 Evaporative Emission Control System Purge Control Valve circuit Malfunction	Gas Cap Replaced, Mass Air Flow sensor connector	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3/31/2021	766	P0051 HO2S Heater Control Circuit Low (Bank 2 Sensor 1)	O2 Sensor Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5/17/2021	747	P0400 Exhaust Gas Recirculation Flow Malfunction, P0403 Exhaust Gas Recirculation Circuit Malfunction	EGR Valve Repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8/4/2021	754	P0306 Cylinder 6 Misfire Detected	IgnitionCoil, Spark Plugs Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8/16/2021	759	P0110 Intake Air Temperature Circuit Malfunction, P0401 Exhaust Gas Recirculation Flow Insufficient Detected, P0440 Evaporative Emission Control System Malfunction, P0442 Evaporative Emission Control System leak Detected (small leak)	IgnitionCoil, Spark Plugs Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9/14/2021	753	P0014 B Camshaft Position - Timing Over-Advanced or System Performance (Bank 1), P0296 Cylinder 12 Contribution/Balance Fault	WT solenoid Intake and exhaust	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9/20/2021	748	P0300 Random/Multiple Cylinder Misfire Detected, P0306 Cylinder 6 Misfire Detected	Diagnostic Testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9/29/2021	788	P0125 Insufficient Coolant Temperature for Closed Loop Fuel Control, P0440 Evaporative Emission Control System Malfunction	Replaced Charcoal Cannister Assembly	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12/1/2021	809	P0400 Exhaust Gas Recirculation Flow Malfunction	EGR Valve Repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12/1/2021	810	P02096 Post Catalyst Fuel Trim System Too Lean (Bank 1)	O2 Sensor Replaced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-Evap Repairs

EVAP Repairs (Includes Gas Caps)

Invoice Date	VoucherID	Repairs
2/9/2021	762	Evap System repair, Throttle Body Cleaning
3/10/2021	763	Mass Air Flow sensor connector
5/14/2021	746	Vent Valve Replace
8/5/2021	793	Gas Cap Replaced
9/7/2021	782	Fuel Evaporative Canistr Replace
9/21/2021	755	Gas Cap Replaced
9/24/2021	798	Evaporator Purge Valve
9/29/2021	788	Replaced Charcoal Cannister Assembly
10/13/2021	757	Gas Cap Replaced
11/29/2021	797	Gas Cap Replaced
12/20/2021	785	Gas Cap Replaced

Gas Cap and EVAP Repairs

HC Reductions lbs/yr

Annual Reductions lbs/yr		
HC	NOx	CO
1692.97	-3.91	-84.79

HC Includes Evap

ATTACHMENT 6

**EMISSION REDUCTION RESPONSE SHEETS
AND LETTERS**



Corpus Christi LNG, LLC
622 Hwy 35
Gregory, TX 78359
Phone: (361) 977-1000
Cheniere.com

March 3, 2022

Ms. Gretchen Arnold
Director, Coastal Bend Air Quality Partnership

**RE: Commitment to Air Quality Improvements
Corpus Christi Liquefaction**

Dear Ms. Arnold,

Corpus Christi Liquefaction, LLC (CCL) is committed to supporting efforts to maintain and improve air quality in the Corpus Christi Urban Airshed and surrounding communities. CCL will continue to promote the following voluntary reductions to support continued air quality improvements in the region:

Staying Informed and Communicating

- Register with AirNow to receive email or text alerts for ozone action days.
- Register with TCEQ to receive weekly ozone forecasts.
- Communication to CCL Employees of emission reduction policies and recommendations.

Vehicle and Equipment Emissions

- Provide resources for CCL employees to telecommute, particularly on elevated ozone days.
- Provide resources for CCL employees to teleconference.
- Provide park and ride or shuttle service for CCL employees.
- Use of low sulfur diesel fuel for our diesel fleet and all diesel operated equipment.

Operations

- Require vendors and contractors to properly dispose of items containing VOC chemicals.
- Recommend vendors and contractors to use scrubbers on VOC chemical extraction processes.
- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions and perform inspections.
- Perform routine inspections for leaks and fugitive emissions.
- Use of vapor recovery or incineration.

In addition, the following air emission reduction commitments are planned for 2022:

- Provide charging stations for alternative fuel vehicles.
- Facility wide use of Tier 4 generators.
- Communicate local Ozone Action Days to employees.

If you have any questions regarding this information, please contact Jessica Muennink, HSE Manager, at (361) 977-1342 or jessica.muennink@cheniere.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ari Aziz". The signature is stylized and cursive.

Ari Aziz

Vice President and General Manager

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other _____

Vehicle and Equipment Emissions

- Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- Provide resources for your employees to telecommute, particularly on elevated ozone days.
- Provide resources for your employees to teleconference.
- Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- Use alternative fueled vehicles and equipment.
- Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- Use low sulfur diesel fuel for your diesel fleet.
- Other _____

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- Postpone ground crew activities on elevated ozone days.
- Postpone surface coating operations on elevated ozone days.
- Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- Require vendors to use low VOC paints, solvents and adhesives.
- Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- Perform routine inspections for leaks and fugitive emissions.
- Installation of low NOx burners on boilers or heaters.
- Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- Use of flue gas recirculation.
- Use of vapor recovery or incineration.
- Installation of additional seals and liners on storage tanks.
- Other _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- Provided charging stations for alternative use vehicles_____
- Routine inspection on storage tanks._____
- Communication was be sent to all CCL Employees to remind them of emissions reduction policies and recommendations._____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- _____
- _____

Cheniere

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- ✓ Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- ✓ Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other _____

Vehicle and Equipment Emissions

- Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it’s just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- Provide resources for your employees to telecommute, particularly on elevated ozone days.
- ✓ Provide resources for your employees to teleconference.
- ✓ Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- Use alternative fueled vehicles and equipment.
- ✓ Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- ✓ Use low sulfur diesel fuel for your diesel fleet.
- ✓ Other: Use of an onsite fuel pump for fleet vehicles
- ✓ Other: Automated system that flags vehicle Engine Check alarms and triggers prompt maintenance/repair.
- ✓ Other: Automated vehicle idling tracking system that flags overly idled vehicles.

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- ✓ Postpone ground crew activities on elevated ozone days.
- Postpone surface coating operations on elevated ozone days.
- Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- ✓ Require vendors to use low VOC paints, solvents and adhesives.
- ✓ Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- ✓ Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- ✓ Implement a flare reduction program.
- ✓ Utilization of IR cameras to detect and repair fugitive emissions.
- ✓ Perform routine inspections for leaks and fugitive emissions.
- ✓ Installation of low NOx burners on boilers or heaters.
- ✓ Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- ✓ Use of flue gas recirculation.
- ✓ Use of vapor recovery or incineration.
- ✓ Installation of additional seals and liners on storage tanks.
- ✓ Other Onsite dining

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- ✓ Expanded VOC sensor network within the West refinery process units to provide continuous monitoring data for digital monitoring system to enhance safety and reduce emissions.
- ✓ Installed continuous VOC sensors around the East and West refinery perimeters next to the passive benzene monitoring stations for earlier detection and quicker response to potential emission sources.
- ✓ Installed additional VOC controls on an internal floating roof tank to further reduce emissions.
- ✓ Reduced marine transfers of high benzene materials by transferring the materials through pipeline.
- ✓ Permanently shutdown several hydrotreating units at the East Refinery and several tanks.

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- ✓ Continue VOC sensor installation within the East and West Refineries to provide more continuous monitoring data for the digital monitoring system to further enhance safety and reduce emissions.
- ✓ Provide an opportunity for employees to have their vehicles emission tested with AutoCheck.

Dana S. Peay *Flint Hills Resources Corpus Christi, LLC* *3/5/2022*

Signature

Organization

Date



March 4, 2022

Mrs. Gretchen Arnold
Director, Coastal Bend Air Quality Partnership

Subject: Ozone Advance Agreement 2021 Annual Report

Dear Mrs. Arnold,

Valero Corpus Christi Refineries continues to be a strong supporter of the Coastal Bend Air Quality Partnership (CBAQP) and its efforts to maintain compliance with the current Ozone NAAQS for the Corpus Christi urban airshed. Over the past years, we have implemented the below measures to reduce emissions from our operations:

- Installation of a new state of the art boiler with SCR in Valero East Plant
- Voluntary installation of Flare Gas Recovery Units in support of a flare reduction program at Valero West and East Plants
- Completed low NOx burner replacements on four (4) heaters and a boiler in the Valero West Plant
- Installation of ultra-low NOx burners and SCR unit on new crude unit heater in the Valero West Plant
- Operation of electric engines preferentially over internal combustion engines where practical
- Operation of a Thermal Oxidizer with Carbon Absorption back-up on select tanks, which is above and beyond what BACT requires
- Operation of a new state of the art boiler with SCR in the Valero West Plant
- Operation of Ultra Low Sulfur Diesel and a Gasoline De-sulfurization Units to produce fuel that supports new technology in vehicles that reduces NOx emissions
- Utilize IR camera and early detection technology to identify potential VOC leaks not routinely seen
- Registered with TCEQ to receive weekly ozone forecasts
- Implement projects designed to further improve the reliability of both refineries

Valero takes pride in being a best-in-class producer of fuels and products essential to modern life as well as being a strong environmental steward and community partner. Please let me know if you have questions regarding any of the above listed items. Thank you.

Sincerely,

Joe Almaraz
Director, Environmental, Health & Safety
Valero Corpus Christi Refineries

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- ✓ Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other _____

Vehicle and Equipment Emissions

- ✓ Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- Provide resources for your employees to telecommute, particularly on elevated ozone days.
- ✓ Provide resources for your employees to teleconference.
- Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- ✓ Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- Use alternative fueled vehicles and equipment.
- ✓ Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- ✓ Use low sulfur diesel fuel for your diesel fleet.
- Other _____

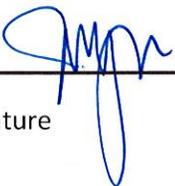
Operations.

- Postpone non-essential deliveries on elevated ozone days.
- Postpone ground crew activities on elevated ozone days.
- Postpone surface coating operations on elevated ozone days.
- Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- Require vendors to use low VOC paints, solvents and adhesives.
- Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- Perform routine inspections for leaks and fugitive emissions.
- Installation of low NOx burners on boilers or heaters.
- Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- Use of flue gas recirculation.
- Use of vapor recovery or incineration.
- Installation of additional seals and liners on storage tanks.
- Other _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

Use of early detection equipment

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022


Signature

Valero Refining, Tx. L.P.
Organization

3/4/2022
Date

Communications:

- Registered to receive ozone elevation notifications
- Communicate emission reduction recommendations to employees and vendors
- Provide ozone education to personnel
- Adjust delivery schedules if possible to reduce excess driving

Operations:

- Use of high hydrogen fuel gas in ethylene cracking furnaces to reduce NOx and CO
- Treating furnace ethylene cracking tubes to inhibit coke buildup and reduce decoke activities
- Fenceline Monitoring to help identify and reduce potential VOC emissions
- Improved furnace heat recovery for steam production to reduce fired boiler emissions Flare reduction/minimization program
- Utilization of IR cameras for inspections
- Routine inspections for leaks and fugitive emissions
- Use of Low NOx burners
- Use of CEMS analyzers to monitor NOx and CO emissions
- Use of low emitting tank roofs
- Regular tune-ups of boilers and process heaters
- Fired source alarm controls to optimize combustion and limit firing rate
- Flare gas analyzers
- Installation of scrubbers and carbon canisters on frac tanks and vacuum trucks
- Use of vapor recovery
- Identification and repair of steam leaks

Maintenance Activities:

- Delay painting and lawn mowing during ozone action days
- Avoid use of diesel air compressors when possible
- Replacement of diesel driven air compressor with electric motor driven air compressor
- Reduce the use of engine driven equipment as possible;
- Limit refueling of plant vehicles between 6:00 AM and 2:00 PM when possible
- Encourage carpooling to and inside the plant if possible

Office Energy Efficiency:

- Encourage employees to turn off lights in rooms that are not in use
- Set office equipment in low power mode when possible
- Set thermostats to a comfortable but efficient level
- Improve insulation for heated sources

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- The Corpus Christi MPO participated in the meetings of the Coastal Bend Air Quality Partnership to stay connected to their efforts related to voluntary air quality strategies.
- The MPO staff continued to scan air quality related articles, reports and presentations by various state and federal agencies to look for opportunities for local actions.
- The Corpus Christi MPO continually lists the Corpus Christi Ozone Advance Annual reports from the Coastal Bend Air Quality Partnership on its Environment/Air Quality web page - https://www.corpuschristi-mpo.org/04_studies_eaq.html.

Vehicle and Equipment Emissions

- Provided resources and offer incentives for your employees to carpool, particularly on elevated ozone days.
- Provided resources and offered incentives for your employees to work remotely or use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- Provided resources for your employees to telecommute, particularly on elevated ozone days.
- Provided resources for your employees to teleconference.
- Provided flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to share with employees related to commute resources are found at <https://www.bestworkplaces.org/>.
- Provided an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 361-825-3070.

Operations

- Not applicable to the MPO.

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- The Corpus Christi MPO staff supported regional planning to address mitigation of environmental, historic preservation, stormwater, and air quality impacts of transportation in alignment of environmentally related performance measures.
- Completed narrative and data contributions to the annual Ozone Advance and other regional reporting Documents.

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- Continue the registration with AirNow to receive email or text alerts for ozone action days. <http://www.enviroflash.info/signup.cfm>
- Continue the registration with TCEQ to receive weekly ozone forecasts. Link the forecasts on the Corpus Christi MPO website. Forecasts are provided via email, text or social media and will be forwarded throughout your workplace. Registered at the link: <https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>.
- Continue to communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- We will create and look to update and modify the Air Quality Information section to the Corpus Christi MPO website to enable visitors to the MPO information to be able to link to updated air quality reports and conditions.

- The Corpus Christi MPO staff will continue to support regional planning to address mitigation of environmental, historic preservation, stormwater, and air quality impacts of transportation in alignment of environmentally related performance measures.
- Complete narrative and data contributions to the annual Ozone Advance and other regional reporting Documents.
- The Corpus Christi MPO will participate in the activities of the Coastal Bend Air Quality Partnership to stay connected to their efforts related to air quality strategies.
- The MPO staff will continue to scan air quality related articles, reports and presentations by various state and federal agencies to look for opportunities for local actions.



Corpus Christi MPO

03/14/2022

Robert F. MacDonald
Transportation Planning Director

Organization

Date



March 18, 2022

Ms. Gretchen Arnold
Chair, Coastal Bend Air Quality Partnership

Re: Commitment to Air Quality Improvements
NuStar Logistics, L.P.- Central West South Region

Dear Ms. Arnold:

NuStar Logistics, L.P. remains committed to supporting efforts to maintain and improve air quality in the Corpus Christi Urban Airshed. Commitment to achieving environmental excellence continues to be a top priority at NuStar and is included in the first of our company's Guiding Principles and is exemplified by NuStar personnel.

NuStar will promote continued improvements in the air quality of the area by re-committing to the following measures:

- Notify South Texas employees of Ozone Action Days and offer suggestions for minimizing mobile sources,
- When possible, schedule maintenance activities like mowing and painting around Ozone Action Days,
- Utilize low VOC solvents, paints, and adhesives when possible,
- Receive ozone alerts through AirNow and TCEQ,
- Utilize teleconference when feasible to minimize vehicular traffic during Ozone Action Days and,
- Continued participation in the Coastal Bend Air Quality Partnership.

If you have any questions, please contact me at (361) 249-9402 or by email at wes.gore@nustarenergy.com.

Sincerely,

Wes Gore
VP and GM of NuStar Energy Central West South Region

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other _____

Vehicle and Equipment Emissions

- Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- Provide resources for your employees to telecommute, particularly on elevated ozone days.
- Provide resources for your employees to teleconference.
- Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- Use alternative fueled vehicles and equipment.
- Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- Use low sulfur diesel fuel for your diesel fleet.
- Other _____

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- Postpone ground crew activities on elevated ozone days.
- Postpone surface coating operations on elevated ozone days.
- Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- Require vendors to use low VOC paints, solvents and adhesives.
- Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- Perform routine inspections for leaks and fugitive emissions.
- Installation of low NOx burners on boilers or heaters.
- Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- Use of flue gas recirculation.
- Use of vapor recovery or incineration.
- Installation of additional seals and liners on storage tanks.
- Other _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- _____
- _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- _____
- _____

 _____ *CITY OF PORTLAND* _____ *3/1/2022*
Signature Organization Date

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- ✓ Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- ✓ Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.

Vehicle and Equipment Emissions

- ✓ Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- ✓ Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- ✓ Provide resources for your employees to telecommute, particularly on elevated ozone days.
- ✓ Provide resources for your employees to teleconference.
- ✓ Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- ✓ Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- ✓ Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- ✓ Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- ✓ Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- ✓ Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- ✓ Use alternative fueled vehicles and equipment.
- ✓ Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- Use low sulfur diesel fuel for your diesel fleet.

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- ✓ Postpone ground crew activities on elevated ozone days.
- ✓ Postpone surface coating operations on elevated ozone days.
- ✓ Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.

- ✓ Require vendors to use low VOC paints, solvents and adhesives.
- ✓ Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
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- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- Perform routine inspections for leaks and fugitive emissions.
- ✓ Installation of low NOx burners on boilers or heaters.
- Installation thermal oxidizers on storage tanks.
- ✓ Use of low NOx water heaters.
- Use of flue gas recirculation.
- Use of vapor recovery or incineration.
- Installation of additional seals and liners on storage tanks.



Nathaniel Galvan

Texas A&M University Corpus Christi

3/1/2022

Signature

Organization

Date

Port of Corpus Christi Accomplishments 2021

The Port continued to enforce its anti-idling policy through the Drive Cam system which identifies idling non-conformances in all Port-owned vehicles. A graph of idling non-conformances in each department was sent out to all employees to highlight departments that need to improve compliance.

As part of the Clean Fleet Program, the PCCA purchased 6 hybrid vehicles to reduce emissions from gasoline engines. Two of the vehicles purchased were plug-in hybrid vehicles, which offer an even more significant reduction in vehicle emissions. PCCA also purchased an electric vehicle charging station to be installed at the Port's Executive Administration Building.

PCCA continued to work with the Texas A&M University-Corpus Christi Pollution Prevention Partnership (PPP) to monitor emissions from the Port's vehicle fleet by testing all Port vehicles for elevated emissions. PCCA also worked with the PPP to host a public emissions monitoring event at Whataburger Stadium. Significant funding was also provided by the Port for PPP activities, and financial support for the transition of the Coastal Bend Air Quality Partnership.

The Port completed a 2020 Air Emissions Inventory and presented the findings at the November 16th Port Commission Meeting. An emissions inventory is completed by the Port every three years and compiles all air emissions resulting from operations at the Port. The timing of the completion of this emission inventory aligns with the TCEQ's preparation of point source and area mobile emissions. Therefore, the Port's consultant provides a regional emission inventory summary. One additional component in the 2020 emission inventory is inclusion of the emissions from lightering activities that occur in the Gulf of Mexico. This portion of the emission inventory is still underway and expected to be completed in the second quarter of 2022.

Path Forward for Port of Corpus Christi 2022

The Port will continue the implementation of the Clean Fleet Program, five hybrid electric vehicles have been requested to replace vehicles in the current fleet. The Clean Fleet Program is planned to be fully implemented by 2025. The Port is also Implementing a Clean Equipment Program which will replace gasoline-powered equipment with electric and CNG-powered equipment as alternatives become available.

PCCA will continue to work with the Texas A&M University-Corpus Christi Pollution Prevention Partnership (PPP) to monitor emissions from the Port's vehicle fleet and coordinate public monitoring events. The Port will continue to provide financial support for the Pollution Prevention Partnership and the Coastal Bend Air Quality Partnership.

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- ✓ Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- ✓ Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other _____

Vehicle and Equipment Emissions

- ✓ Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- ✓ Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- ✓ Provide resources for your employees to telecommute, particularly on elevated ozone days.
- ✓ Provide resources for your employees to teleconference.
- Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- ✓ Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- ✓ Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- ✓ Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- ✓ Use alternative fueled vehicles and equipment.
- ✓ Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- ✓ Use low sulfur diesel fuel for your diesel fleet.
- Other _____

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- ✓ Postpone ground crew activities on elevated ozone days.
- ✓ Postpone surface coating operations on elevated ozone days.
- ✓ Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- ✓ Require vendors to use low VOC paints, solvents and adhesives.
- ✓ Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- ✓ Perform routine inspections for leaks and fugitive emissions.
- Installation of low NOx burners on boilers or heaters.
- Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- Use of flue gas recirculation.
- Use of vapor recovery or incineration.
- ✓ Installation of additional seals and liners on storage tanks.
- Other _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- ✓ _ Purchasing six hybrid electric vehicles for the Port's fleet _____

- _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- ✓ _Continued implementation of the Clean Fleet and Clean Equipment programs _____

- _____

McKenzie Ward

Port of Corpus Christi

3/2/2022

Signature

Organization

Date

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED

2021 – OxyChem Ingleside

Staying Informed and Communicating

- ✓ Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- ✓ Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other Provide ground level ozone education in routine environmental training.

Vehicle and Equipment Emissions

- Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- ✓ Provide resources for your employees to telecommute, particularly on elevated ozone days.
- ✓ Provide resources for your employees to teleconference.
- ✓ Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- ✓ Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- ✓ Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- Use alternative fueled vehicles and equipment.
- ✓ Repower or replace older engines in your fleet.
- ✓ Install filter traps and DOCs on your diesel fleet.
- ✓ Perform diesel retrofits.
- ✓ Use low sulfur diesel fuel for your diesel fleet.
- ✓ Other Use of electric golf carts at facility.

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- ✓ Postpone ground crew activities on elevated ozone days.
- ✓ Postpone surface coating operations on elevated ozone days.
- ✓ Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- ✓ Require vendors to use low VOC paints, solvents and adhesives.
- ✓ Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- ✓ Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- ✓ Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- ✓ Perform routine inspections for leaks and fugitive emissions.
- ✓ Installation of low NOx burners on boilers or heaters.
- ✓ Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- ✓ Use of flue gas recirculation.
- ✓ Use of vapor recovery or incineration.
- ✓ Installation of additional seals and liners on storage tanks.
- ✓ Other Use of pressure vessels venting to control device (thermal oxidizer) for VOC storage

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- ✓ Encourage employees to use energy efficiently.
- _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- ✓ Support parent company (Occidental Petroleum Corp.) efforts to reduce Green House Gas emissions and manage carbon.
- _____



Aron Baggett – Environmental Manager

OxyChem Ingleside

3/2/2022

Signature

Organization

Date

County of Nueces

Department of Public Works

County Roads and Bridges
Engineering Services
Facilities Management
Environmental Enforcement
9*1*1 Addressing Program



Juan A. Pimentel, P.E.

Director of Public Works
Nueces County Engineer

March 3, 2022

Gretchen Arnold
Chair, Corpus Christi Air Quality Group
121 Atlantic St.
Corpus Christi, TX. 78404

Re: Nueces County Public Works Voluntary Air Emissions Reduction Measures-January 1, 2021-March 14, 2022

Dear Ms. Arnold:

This is a summary of the Nueces County Department of Public Works' (DPW) voluntary measures to reduce the County's ozone emissions with collateral benefit of reducing our carbon footprint. Our objectives are long term, and the measures achieve air emissions reductions of ozone precursors like VOCs and NOx in the most productive and effective manner in the countywide urban and suburban airsheds. Nueces County as a good neighbor, programmatically incorporated measures that are pragmatic, effective, practicable, sustained by good engineering and protective of life safety issues to proactively contribute to the total effort of the Ozone Taskforce to voluntarily reduce ozone and ozone precursor pollutant emissions through a combination of available technology and commonsense practices. This summary is for Ozone (Oxides of Nitrogen, NO composed of nitric oxide and nitrogen dioxide NO2; and volatile organic compounds, VOCs as the key precursors) reduction measures from Jan 1, 2021 through March 03, 2022. The report is formatted to address your response request criteria.

In cognizance of the recent episodic arctic cold weather in mid-February 2021, when the Texas Electricity Grid encountered extreme increases in electricity demand such that there was inadequate supply which resulted in power outages and adverse impacts on consumer life safety and equipment that relies on electric power. Thus it is most important that consumers conserve power by using electrical and fossil energy efficiently, effectively and wisely, by proactively using energy conservation measures, such as equipment replacement, retrofits and modifications to improve efficiency and conserve energy to do our part in reducing energy and power demand on the source (Electricity Generators), because the existing grid and power generation appeared to be inadequate in fulfilling the electricity demand during such adverse cold weather that is alien to a southern state like Texas. Conservation of energy allows us to use energy efficiently, sustain our needs and reduce our ozone emissions and carbon footprint.

Nueces County recognized the need to proactively conserve energy early on in 2019 and 2020, when we redesigned, replaced, revamped and retrofitted our heaviest electricity consuming systems to improve efficiencies of our electricity consuming systems by tailoring their retrofit designs to make them capable of providing adequate electrical energy and power, and at the same time reduce our total load on the

electricity generators, which are the point sources of the carbon footprint for the Coastal Bend Urban and Suburban airsheds.

The DPW maintains a fleet of vehicles and equipment for routine maintenance of roads and bridges in the unincorporated areas of Nueces County using petroleum road base materials, fuels, lubricants and additives for road repair. We also provide civil construction and general MEP (Mechanical, Electrical and Plumbing) repair, modulation, maintenance services and technical assistance to over 50 County buildings which consume utilities (electricity, natural gas and water) for domestic consumption, and heating ventilation and air conditioning (HVAC) systems such as direct expansion, chilled water, rooftop and split systems. We are happy to state, our biggest buildings with chilled water HVAC systems are retrofitted with sequentially programmed (in effect a system that self modulates operations and sequences through Artificial Intelligence Controllers-fed continuous data to make continuous instantaneous decisions evaluating trends to make decisive corrections and over-rides) and thus conserve energy, and extend equipment life, with the ultimate target of reducing our carbon (fossil fuel dependent) footprint. Using real-time data to archive equipment behavior pattern and history, we estimate the useful effective life of major equipment (such as Courthouse Chillers) is near terminus, after which we design and fund replacement of obsolete and relatively inefficient equipment and their in-train devices to improve efficiency and significantly reduce the consumption of utilities that get power from the ultimate point source Power Plant (Electricity Generator) that relies on fossil fuels. This assures quantifiable reduction of fossil fuel consumption and ozone emissions at the source of power generation and is detailed under Section V of this report.

The following is a summary of Nueces County's Energy Conservation Efforts managed and executed by the Department of Public Works:

I. Staying Informed, Communicating and Training:

The Director of Commissioners Court and Director of Commissioners Court and Public Information Officer Mr. Tyner Little and or his designee) has:

- o Registered with AirNow to receive email or text alerts for ozone action days
<http://www.enviroflash.info/signup.cfm>
- o Registered with TCEQ (We are using the link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
to receive weekly ozone forecasts that are provided via email, text or social media and which will be forwarded to the DPW Construction Engineer Mr. Perez, P.E. and immediately disseminated throughout our workplace by him and our head foreman Mr. Jerry Garcia under my direct oversight.

Public Works and other Departments' senior staff, and I track local media broadcasts, bulletins and advisories for elevated ozone alerts, which in turn are communicated to the head foreman for dissemination down the chain of command to field workers and technicians that everyone is notified.

II. Employees and Appropriate Training:

All employees, vendors and contractors are encouraged to voluntarily conduct activities that result in ozone and ozone precursor emissions reductions, without compromising safety, work output, quality or schedules, so our work is done in compliance of applicable Local and State Regulations and mandatory Texas Jail Standards (we maintain and operate Jails and Courts).

- (i). Employees are encouraged to carpool, particularly on elevated ozone days, even for lunch.

County of Nueces

Department of Public Works

County Roads and Bridges
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Juan A. Pimentel, P.E.

Director of Public Works
Nueces County Engineer

- (ii). Employees are encouraged to use alternative modes of transportation (bus, bike, walk), on ozone days.
- (iii). Exempt employees have liberty to dress comfort casual.
- (iv). Employees are encouraged to take advantage of the RTA van pool program if practicable.
- (v). Pool cars are provided designated parking spots.
- (vi). Informal ozone education/training is imparted during dialogue between supervisors and employees.

III. Contractors and Vendors

- (i). Recommend minimal idling of vehicles by contractor and delivery vehicles.
- (ii). Prioritize and schedule deliveries by reducing non-essential deliveries on elevated ozone days.
- (iii). Recommend painters to use low VOC paints as practicable.
- (iv). Require grounds crews to minimize operations on elevated ozone days.
- (v). Recommend vendors and contractors to use low VOC solvents.
- (vi). Recommend vendors and contractors to use low VOC adhesives.
- (vii). Require vendors/contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals

IV. Fleet Vehicles

- (i). We have alternate fueled (propane, CNG) vehicles in our fleet.
- (ii). Periodically we emissions test our fleet to ensure it is well maintained.
- (iii). Programmed and scheduled replacement of older units in fleet.
- (iv). Replace or rehabilitate older engines in fleet.
- (v). Recommend minimum idling of all fleet vehicles, with due consideration for public and employee safety.
- (vi). Perform diesel retrofits upon need.
- (vii). Our underground storage tanks (USTs) have low sulfur diesel for our fleet and off-road equipment.
- (viii). Our USTs are tested monthly for vapor releases under a TCEQ approved leak detection program to insure we minimize air emissions of VOCs as well as subsurface contamination from uncontrolled releases. Deficiencies are immediately corrected.

V. Mechanical Electrical and Other Non-Fleet Equipment

- (i). All boilers that operate on natural gas fuel use low NOx burners.
- (ii). Boilers/heaters undergo scheduled maintenance to keep them well tuned which reduces ozone emissions.
- (iii). All of the HVAC chilled water systems (chillers, condensers, evaporators, cooling towers, AHUs, VAVs et al) located at the Courthouse-Jail, Juvenile Detention, and McKinzie Annex have been retrofitted with Energy Savings Controls like VFDs, Network Engines, Field Controllers, wireless transmitters on VAVs and AHUs, gauges, sensors, capacitor banks, water conservation devices and

sensors, solar water heater, solar photovoltaic electricity arrays, a wind turbine and a solar array at Central garage, to conserve energy which ultimately augments reduction of ozone related emissions from the point source (Electricity Generation Power Station). This was done under the State of Texas State Energy Conservation Office (SECO) recommended engineered equipment utility cost reduction measures (UCRMs), at a cost of about \$ 18 million. Energy efficiency has resulted in quantifiable energy savings with emissions reductions of ozone precursors.

(iv) About 3 years back, we retrofitted 7 additional buildings with remote controls for operational optimization, energy savings, enhanced performance and remote modulation to save time and money, eliminating technicians' on-site commutes to trouble shoot malfunctions, by evaluating systems and malfunctions via a graphics interface on our PCs (web-based system trademarked Niagara) online.

(v). All of the HVAC and other equipment follows a rigorous scheduled maintenance program.

(vi). The 2 Courthouse Chillers (875 tons/hr. of cooling capacity) and 2 McKenzie Annex Jail Chillers (200 ton/hr. of cooling capacity) have been replaced. Our engineers had tested and determined the Chillers were at their life cycle terminus and after that they were replaced in early 2020 and late 2021. Respectively, this replacement has resulted in significant energy consumption reductions which have the end effect of significantly reducing our airborne ozone precursor emissions by conserving energy, at the power generation sources in our airshed. We are proud of our contribution in reducing the ozone emissions and thus help in maintaining Nueces County's status as "Attainment" for all EPA designated criteria pollutants. This provides Nueces County with a significant economic advantage over most other major Counties in the United States.

(vii). Electric lights in our buildings and facilities have been replaced with more efficient low power consuming ones, in about 70 % of our offices. Heat and opacity detection sensors (infra-red and photoelectric sensors) automatically turn them on or off based upon occupancy load.

(vii). We are now actually realizing more energy consumption savings from the 2 New CH chillers along with contributions in energy savings from the major almost 80 % upgrades, retrofits, repairs and modifications to the open loop water system (condensers to cooling towers and back) with our 3 cooling towers resulting in significant improvement of the heat exchange efficiency and resultant energy consumption savings.

(viii). Realtime engineering measurement of our targeted devices of our energy savings systems show about 25 % reduction in actual consumption for water, gas and electricity, proportionally reducing emissions from the Power Generation point source, thereby accomplishing our main objective of ultimately reducing ozone and ozone precursor emissions.

VI. Vehicle and Equipment Emissions

The following are general emissions reduction measures:

- (i) Our on and off-road equipment used during construction and repair is equipped with pollution prevention devices; we do not allow idling and utilize low sulfur diesel.
- (ii) We encourage employees to carpool, particularly on elevated ozone days, including lunch.
- (iii) We encourage employees to use alternative modes of transportation during ozone alert days.
- (iv) Provide resources to employees to telecommute, particularly on elevated ozone days.
- (v) Provide resources for employees to teleconferencing.
- (vi) Provide flexible work schedules to reduce on-road vehicles during congested times. Our ability is limited because we have strict timelines for road repair and public and employee safety mandate.
- (vii) Provide park and ride car-pool service to employees during ozone alerts and on-site for work.
- (viii) Encourage employees to join RTA van pool program (<https://www.ccrta.org/rider-info/programs/>)

County of Nueces

Department of Public Works

County Roads and Bridges
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Juan A. Pimentel, P.E.

Director of Public Works
Nueces County Engineer

- (ix) Advise employees to have their personal vehicles emission tested with Auto Check (361-825-3070).
- (x) Our fleet emissions are tested, and necessary repairs made to minimize fleet emissions.
- (xi) We have an anti-idle requirement for all construction, contractor, delivery and freight vehicles.
- (xii) Use alternative fueled vehicles/equipment as appropriate without compromising work quality or safety.
- (xiii) We replace older vehicles under a formal program for older/high mileage fleet vehicles.
- (xiv) Our fleet vehicles are equipped with filter traps and DOCs if they are fueled with diesel.
- (xv) All our fleet vehicles use low sulfur diesel fuel.

VII. Operations.

The following measures are automatically incorporated in our activities and operations as long as safety and work quality are not compromised.

- (i) As feasible we postpone non-essential deliveries on elevated ozone days.
- (ii) As feasible, we postpone ground crew activities on elevated ozone days.
- (iii) If possible, we postpone surface coating operations on elevated ozone days.
- (iv) Postpone non-essential activities that emit VOCs or NOx on elevated ozone days.
- (v) Require vendors to use low VOC paints, solvents and adhesives.
- (vi) Require vendors/contractors to properly dispose of VOC containing wastes (rags, buckets, drums, etc.).
- (vii) We do not require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- (viii) We do not have chemical processing units, so a flare reduction program is irrelevant in our operations.
- (ix) We use a FLIR (Forward Looking Infra-Red) camera to detect and repair failures, leaks and electrical shorts.
- (x) We have a formal inspection program to measure and fix leaks and fugitive emissions for USTs.
- (xi) All of our boilers are equipped with low NOx burners.
- (xii) Our storage tanks are for diesel, gasoline and asphalt, so we do not require thermal oxidizers.
- (xiii) We use low NOx boilers and electrical water heaters.
- (xiv) We do not need flue gas recirculation because we don't have refining, distillation or cracking units.
- (xv) We do not need secondary vapor recovery or incineration for our fuel dispensing activities.

(xvi) Proper seals and liners are installed on our fuel storage tanks which are inspected under a schedule.

In our chain of command, field level foremen and supervisors are authorized to immediately correct deficiencies and failures by treating them as emergencies, in effect incorporating measures to conserve energy, minimize environmental upsets and incorporate corrective measures at the ground level. If you have any questions, please contact me.

Sincerely,



Juan A. Pimentel, P.E.
Director of Public Works/County Engineer

Cc: Barbara Canales, County Judge

VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED 2021

Staying Informed and Communicating

- Register with AirNow to receive email or text alerts for ozone action days.
<http://www.enviroflash.info/signup.cfm>
- Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Communicate elevated ozone forecasts to employees, vendors and contractors and remind them of your emission reduction policies and recommendations.
- Other _____

Vehicle and Equipment Emissions

- Require that all on and off road construction equipment used during the facility construction process be equipped with pollution prevention devices, practice anti idling, and utilize low sulfur diesel
- Provide resources and offer incentives for your employees to carpool, particularly on elevated ozone days – even if it's just for lunch.
- Provide resources and offer incentives for your employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- Provide resources for your employees to telecommute, particularly on elevated ozone days.
- Provide resources for your employees to teleconference.
- Provide flexible work schedules to remove vehicles from the road during congested times.
 - Information including templates and tools to provide employee commute resources can be found at <https://www.bestworkplaces.org/>
- Provide park and ride or shuttle service for your employees.
- Participate in the RTA van pool program.
 - Local van pool, shuttle and park and ride opportunities can be found at <https://www.ccrta.org/rider-info/programs/>
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Have your fleet emissions tested via AutoCheck and perform necessary repairs to minimize fleet emissions.
- Have an anti-idle policy for all construction, contractor, delivery and freight vehicles.
- Have an anti-idle policy for your fleet.
 - Information including templates and tools to establish an anti-idle policy can be found at <https://cleancities.energy.gov/technical-assistance/idlebox/>
- Use alternative fueled vehicles and equipment.
- Repower or replace older engines in your fleet.
- Install filter traps and DOCs on your diesel fleet.
- Perform diesel retrofits.
- Use low sulfur diesel fuel for your diesel fleet.
- Other _____

Operations.

- Postpone non-essential deliveries on elevated ozone days.
- Postpone ground crew activities on elevated ozone days.
- Postpone surface coating operations on elevated ozone days.
- Postpone any non-essential activity that emits VOCs or NOx on elevated ozone days.
- Require vendors to use low VOC paints, solvents and adhesives.
- Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals.
- Require vendors and contractors to use scrubbers on VOC chemical extraction processes.
- Implement a flare reduction program.
- Utilization of IR cameras to detect and repair fugitive emissions.
- Perform routine inspections for leaks and fugitive emissions.
- Installation of low NOx burners on boilers or heaters.
- Installation thermal oxidizers on storage tanks.
- Use of low NOx water heaters.
- Use of flue gas recirculation.
- Use of vapor recovery or incineration.
- Installation of additional seals and liners on storage tanks.
- Other _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES PERFORMED IN 2021

- _____
- _____

ADDITIONAL VOLUNTARY AIR EMISSION REDUCTION ACTIVITIES COMMITTED TO FOR 2022

- _____
- _____

Signature

Organization

Date

APPENDIX A

PATH FORWARD LETTER

APPENDIX A

PATH FORWARD COMMITMENTS

Port of Corpus Christi and Construction Emissions Inventory

The Corpus Christi air-shed 2011 emissions inventory provided by TCEQ did not include port emissions or construction equipment. The Corpus Christi Air Quality Group requested a work-plan and quote from StarCrest LCC to provide an inventory and accurate analysis of overall emissions contributions for our air-shed. The Port of Corpus Christi has committed to funding the Year 1 and 2 work plans for a total amount of \$153,500 and StarCrest will perform those activities.

Establishment of Air Quality Position and Program

The Group will work with stakeholders and potential sponsors to secure funding for a position that delivers a community-wide education campaign that strives to educate members of the community about the air quality impact of their choices and lower emission alternative choices that are available to them. An educated public is an important component in a community that strives to maintain healthy air quality.

Air Quality Curricula

An area Industry funded air quality curriculum will be delivered to 5th grade classes.

Research, Modeling and Monitoring

Operate and maintain the three research grade monitoring stations within Nueces and San Patricio counties. These include: an upwind site at the wastewater treatment plant in Aransas Pass, TX (CAMS 659); a downwind site located at Violet Road, near Robstown, TX (CAMS 664); an urban site at the municipal water pumping station on Holly Road (CAMS 660), SH358 (South Padre Island Drive) in Corpus Christi.

An additional research grade monitoring station, CAMS 686 (Odem, Texas) setup in the San Patricio county as an integral part of the Supplemental Environmental Project (SEP), will also be maintained for better spatial assessment of ozone levels within the Airshed. Acquire data using an Enfora modem and provide the data to the public, stakeholders, and other researchers on TCEQ's website using the LEADS data acquisition system. Conduct continuous monitoring of nitrogen oxides (NOx) concentration at an identified site during the 2014-2015 ozone season.

Update the conceptual modeling report with the ozone concentrations as measured to identify and characterize the ozone episodes. The data will also be used to identify potential photochemical episodes for further analysis.

Update the attainment status of ozone National Ambient Air Quality Standards (NAAQS) and analyze the design value trends for the Airshed through the current ozone season. The ozone concentrations measured at the compliance grade monitoring stations maintained and operated by TCEQ (CAMS 04, CAMS 21) along with the research grade monitoring stations maintained and operated by UNT/TAMUK (CAMS 660, CAMS 664,

CAMS 659, and CAMS 686) will be used to study the annual and seasonal trends of ozone exceedances along with the diurnal trends. The ozone concentrations will be further used to identify the episode days exceeding current NAAQS and to characterize the prevailing meteorological conditions. The analysis will be used to update the conceptual modeling report for the Airshed for further identification of photochemical modeling episodes.

AutoCheck/Clean Fleet Vehicle Emissions Testing and Repair

The Pollution Prevention Partnership (P3) provides information, education and awareness campaigns, research, and participation in and promotion of ozone reduction strategies among citizens and organizations, and administration of the AutoCheck Supplemental Environmental Program (SEP). The AutoCheck SEP provides emissions data and direct reduction of emissions by screening and repair of highly polluting vehicles.

The “Clean Fleet” vehicle emissions testing program will hold a minimum of one testing event each month. The program will include direct emissions testing from the tail pipe, possible repairs, post-repair direct emissions testing from the tail pipe, and an approximation of emissions reductions as a result of the repair. Certified garages will perform the repairs.

Use of IR Cameras

Several Port Industries will continue to utilize IR cameras to detect and prevent fugitive emissions beyond what is required in regulations for fugitive emissions.

CCAD Announcement of Ozone Action Days

Corpus Christi Army Depot (CCAD) is one of the largest industrial employers in the airshed and is committed to preventing pollution by including emissions reductions in ozone precursors as part of its environmental strategy. CCAD is a stakeholder in the City’s Air Quality Work Group and provides all employees with notifications when Ozone Action Days are declared and offers voluntary actions to take during and after work periods. CCAD runs a screensaver through its entire web base that informs all employees of Ozone Alert notifications and recommendations.

Production of LRVP Gasoline

Local refineries will continue to provide the Corpus Christi area with gasoline that has a maximum vapor pressure of 7.8 psi during the months of May through September. In the month of October, 9 psi vapor pressure fuel will be provided; a reduction from the maximum of 11.5 psi currently allowed by Regulation in the month of October.

Operation of Public Use Compressed Natural Gas (CNG) Fueling Facilities

The City of Corpus Christi will continue to operate two public use CNG fueling stations. The City of Corpus Christi plans to purchase 15 Original Equipment Manufacture bi-fuel CNG vehicles within the year.

USPS Installation of CNG Fueling Facilities

The US Postal Service will be installing another CNG fueling facility and will be purchasing 26 additional CNG vehicles.

RTA Purchase of CNG Vehicles

The Regional Transportation Authority (CCRTA) will replace seven (7) gasoline fueled Paratransit vehicles with seven (7) CNG fueled vehicles and 24 diesel powered buses with 24 CNG buses by December 2018.

Bicycle Transportation Planning

The Corpus Christi Metropolitan Planning Organization (MPO) will assist other local government agencies in implementing the Regional Bicycle and Pedestrian Plan with the objective of improving facility accessibility to encourage the use of bicycling and walking as trip alternatives. The MPO will assist agencies such as the City of Corpus Christi, to establish a database of accessible bike/pedestrian facilities, to coordinate MPO and City planning documents to be consistent between policies and practices, and to facilitate dialogue between the bicycle community and TxDOT, Texas A&M University-Corpus Christi (TAMUCC), and the City about the creation of new facilities, new policies, and the dissemination of public information.

Corpus Christi Air Quality Group Education Efforts

The Group represents a broad array of agency, industry, university, and media associations. The Chair of the Group will communicate, promote, and encourage all participants and their workplaces to take advantage of the many EPA education and outreach resources for air quality, including Enviroflash, AirNow, social media messaging, brochures, posters, anti-idling program templates and more.

Announcement of Emission Reduction Funding Opportunities

All TCEQ Texas Emissions Reductions Program (TERP), Diesel Emissions Reductions (DERA), and other TCEQ and EPA applications for funding opportunities will be communicated to the Group and their workplaces by the Group's Chair.

Van Share Program Promotion

The Chair of the Group will partner with a Regional Transportation Authority representative to promote the Van Share program and will arrange for presentations at major local employers.

This appendix reflects the major highlights of the Path Forward Commitments to EPA. To view the complete Path Forward letter including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX B

ANNUAL REPORT FOR YEAR 1 ACTIVITIES May 2014 – May 2015

APPENDIX B

ANNUAL REPORT FOR YEAR 1 (May 2014 – May 2015)

Status of Port of Corpus Christi Emissions Inventory Commitment for Year 1 and Year 2 (May 2014 – May 2016)

The commitment for Year 1 and Year 2 is now complete. StarCrest commenced work on the port emissions inventory (including harbor craft and towboats, cargo handling equipment, heavy duty vehicles, ocean going vessels, and rail) and a partial construction equipment emission inventory for Nueces and San Patricio County in June 2014. This analysis will augment the existing mobile source inventory completed by the TCEQ that was completed for 2011, estimated up for 2013, in order to provide a full more current regional emission inventory. StarCrest provided the 2013 Air Emissions Inventory Report which included only the port emissions inventory. The construction equipment inventory effort failed after several attempts to get complete data. StarCrest was able to get data from the Texas Department of Transportation on construction equipment usage in the two counties but was not able to get construction equipment data for other construction activities from the local associated Builders and Contractors or the Associated General Contractors for the timely completion of the 2013 Emissions Inventory Report.

Path Forward Commitments for Year 2/3

A Future Path would be to utilize the emissions inventory data to identify additional emission reduction opportunities that will benefit our region. Additionally, outreach efforts to the two construction contracting company associations continue in the hopes that more accurate construction emission detail can be summarized in the next regional emission inventory.

Status of Establishing Air Quality Position and Program Commitment for Year 1

The commitment of efforts to fund an education position has been met and within the schedule stated in the Path Forward Plan. During May 2014-May 2015, a proposal in the amount of \$100,000 per year was developed by the Pollution Prevention Partnership at Texas A&M University-Corpus Christi to fund an air quality public education program. The proposal included a full-time position salary and benefits as well as a budget for billboards, bus benches, bus wraps, media buys and printed materials. The position would also work to establish relationships with schools to fly air quality flags and distribute any other EPA available material. The proposal was submitted to several representatives of various area businesses and industry as well as the Chamber of Commerce in search of sponsorship. To date, (May 2015) funding for such a program has not been offered or available. Establishing the position and program has not taken place.

Status for Air Quality Curricula Delivery for Year 1

An air quality curriculum was provided to 5th grade students at four area schools. The curricula was delivered by an industry funded consultant. Twenty-two (22) classes received the curricula for a total of five-hundred fifty-one (551) students. Curricula included how ozone is formed, ozone producing activities and ozone emission reduction

recommendations. Tests were submitted to students prior to and after receiving the curricula. Post curricula tests improved to seven out of ten possible correct answers from a pre-test average of 4 out of 10 possible correct answers. The curricula printing, classroom prizes and instructor/consultant time was sponsored by Citgo, Flint Hills, and Valero Refining.

Status of Research, Modeling and Monitoring Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. The research grade monitoring stations have been operated through 2014 measuring continuous ozone measurements and meteorological parameters including resultant wind speed, resultant wind direction, outdoor temperature, and relative humidity. The data has been published on TCEQ's website using the LEADS data acquisition system and is made available to stake holders, policy makers, researchers, and community members. The web link to view and access the data is http://www.tceq.state.tx.us/cgi-bin/compliance/monops/daily_summary.pl. The data measured has been used to update the conceptual modeling report to assess the attainment status, identify episode days for further meteorological analysis, and locate possible regional sources contributing to long-range transport. The conceptual modeling report will be submitted for review and approval by TCEQ.

Path Forward for Monitoring for Year 2

Continuous monitoring of ozone and prevailing meteorological conditions will be continued at the urban site – CAMS 660 and downwind site – CAMS 664 during April 1, 2015 through October 31, 2016. In consideration of industrial development in San Patricio county and monitor, the inbound air parcel transport, CAMS 685 – Ingleside monitoring site setup as an integral part of Supplemental Environmental Project (SEP) will be continued during April 1, 2015 through October 31, 2016.

Status of NOx Monitoring Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. Continuous monitoring of ozone precursor – nitrogen oxides (NOx) was conducted at CAMS 660 – Holly road site during ozone season of 2014. NOx concentrations ranging between 1.5 ppb to 14.5 ppb were measured during April 15, 2014 through October 31, 2014 while NOx concentrations were observed to range between 1 ppb to 10 ppb.

Path Forward for NOx Monitoring

Continuous monitoring of oxides of nitrogen (NOx) will be conducted during ozone season of 2016 (April 1, 2015 through October 31, 2016) at CAMS 660, Holly road site. Detailed data analysis will be conducted to study the trends, identify episodes, and characterize prevailing meteorological conditions.

Status of Commitment to Upgrade Monitors for Year 1

The commitment has been completed within the schedule stated in the Path Forward Plan. Two new Teledyne-API 400E ozone analyzers and Teledyne – NOx analyzer has been acquired. RM Young wind sensors have been repaired and calibrated to acquire valid wind measurements.

Status of Commitment to Update Model for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. A Quality Assurance Project Plan (QAPP) to update the existing conceptual modeling report developed for ozone season 2011 and 2012 has been developed and submitted to TCEQ's technical committee for review. Data analysis has been conducted to update the conceptual modeling report, which upon approval of QAPP will be submitted to TCEQ for review and approval.

Status of Updating Ozone Attainment Status Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. Ozone concentrations and meteorological conditions including resultant wind speed, resultant wind direction, outdoor temperature and relative humidity were measured at compliance grade monitoring stations including CAMS 04 and 21 maintained and operated by TCEQ and research grade monitoring stations CAMS 660, CAMS 659, CAMS 664 and CAMS 686 maintained and operated by UNT-TAMUK to update the existing conceptual modeling report. Continued decrease in the ozone design values has been noted at both the compliance and research grade monitoring stations. During 2014, the fourth highest eight-hour ozone concentrations of 62 ppb, 63 ppb, 66 ppb and 67 ppb were recorded at CAMS 686, CAMS 664, CAMS 660 and CAMS 659, respectively. Data from this activity is reflected in Figures 2, 3, and 4 of this report. Additional analysis of exceedance days considering the current NAAQS of 75 ppb and proposed levels of 70 ppb, 65 ppb and 60 ppb measured at both compliance and research grade monitoring stations during 2014 was conducted to assess the temporal and spatial variations in ozone concentrations. During 2014 one day of exceedance as per the current NAAQS was recorded at CAMS 659 – upwind site and CAMS 660. Seasonal trend analysis of exceedance days demonstrated bimodal distribution with higher numbers during April through May and September through October. Meteorological analysis of the identified episode days indicated dominant wind contribution from the north and northwest. Additional trajectory analysis was conducted using the twenty-four-hour backward trajectories generated using Hybrid Single-Particle Lagrangian Integrated Trajectory-Model (HYSPLIT) for the identified episode days. The trajectory analysis suggested an impact of regional transport from highly industrialized cities of Texas including Houston-Galveston, Beaumont, and Dallas-Fort Worth along with surrounding states. Data has been submitted to TCEQ for review and approval.

Status of AutoCheck/Clean Fleet Vehicle Emissions Testing and Repair Commitment for Year 1

The commitment has been met and within the stated schedule. The Pollution Prevention Partnership held 17 events testing public and fleet vehicles for emissions. A total of 489 vehicles were tested for emissions. Thirty-eight (38) vehicles were identified as polluting and 66 gas caps were identified as leaking and replaced. Approximate emissions reductions as a result of replacing the gas caps and emission reducing repairs is two (2) tons per year of NO_x and four (4) tons per year of HC. (Approximation of emissions reductions based on CARB and California emissions studies on approximating emissions reductions as a result of repairing polluting vehicles.)

http://www.valleycan.org/_pdfs/titu_-2007_ArvinFinalReportJuly10-2008.pdf. The Pollution Prevention Partnership also made numerous presentations to local agencies and community groups encouraging emission-reducing activities. Groups included the Breakfast Club, the USO, local television networks, Rotary, Chamber of Commerce, and more. The Pollution Prevention Partnership's website was used to announce vehicle emission events and other emission reduction information and received 48,709 hits and the social media page reached 552 people.

Status of use of IR Camera Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. Several Port Industries continued to utilize IR cameras to detect and prevent fugitive emissions beyond what is required in regulations for fugitive emissions.

Status of CCAD Notification on Ozone Action Days Commitment for Year 1

Ozone forecasts are made daily by TCEQ meteorologists during the ozone-forecast season; April 1 – October 31. The forecast predicts whether ozone levels in the area are expected to reach or exceed the ozone standards. The EPA sets levels to notify the public about local air quality and recommend steps people can take to avoid exposure to air pollutants. TCEQ meteorologists use a set of criteria from historic meteorological data, ozone measurements, and ozone-prediction models to make these predictions. When they forecast an Ozone Action Day, TCEQ meteorologists contact the National Weather Service, which then broadcasts the information across its "weather wire." The TCEQ also provides a service to email anyone about an upcoming ozone action day. The forecasts are made, in most cases, by 2 p.m. local time and are valid for the next day. There were no Ozone Action Days during Year 1 (May 2014-May 2015), however the CCAD communication system was set up and ready to launch should an Ozone Action Day be called.

Status of Production of LRVP Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. Local refineries provided the Corpus Christi area with gasoline that had a maximum vapor pressure of 7.8 psi during the months of May through September and 9 psi in October of 2014.

Status of Operation of Public Use CNG Fueling Facilities Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward Plan. The City of Corpus Christi has three (3) CNG stations; one (1) for City use only and two (2) are available for public use. The City is currently in the bid process for the establishment of a fourth CNG station which will be available to the public and expects to have that station in operation by 2nd quarter of 2016. The City of Corpus Christi has exceeded the 15-unit commitment and purchased 70 CNG bi-fuel and dedicated vehicles in 2014. There are plans to purchase a minimum of 50 bi-fuel or dedicated CNG vehicles in 2015.

Status of USPS Installation of CNG Fueling Facility for Year 1

The US Postal Service plans to begin this project in 2015.

Status of RTA Commitment to Purchase CNG Vehicles for Year 1

The commitment has been met and ahead of the schedule stated in the Path Forward Plan. The CCRTA replaced 23 diesel Paratransit vehicles and 20 diesel buses with CNG vehicles.

Status of Bicycle Transportation Planning Commitment for Year 1

The commitment has exceeded its tasks and activities as stated in the Path Forward Plan and ahead of schedule. In February of 2015, the Corpus Christi Metropolitan Planning Organization (MPO) undertook a replacement of the 2005 Regional Bicycle and Pedestrian Plan. The new Strategic Plan for Active Mobility will be completed in two phases: Phase I Bicycle Mobility and Phase II Pedestrian Mobility. Phase I will address prescriptively:

- Where (on which corridors/segments) in the urbanized area of Nueces and San Patricio counties should bike facilities be installed to create a cohesive bicycle mobility network that connects key destinations, functionally expands the reach of the transit network, and accommodates a diversity of riders.
- What type of facilities (e.g., on-street bike lanes, separate cycle tracks, etc.) should be installed on which segments.
- How, i.e., to what standards, should those facilities be designed (and maintained). Phase I will also include recommendations and best practices related to:
- Planning of ancillary and end-of-trip facilities (e.g., racks, public repair stations, lockers, bike share infrastructure, way finding.)
- Education, enforcement, and encouragement programs for promoting safe biking culture and awareness.
- Policy and code reform program (i.e., roadway maintenance, safe passage.)
- Development of performance measures to track progress against regional bicycle mobility and safety goals and objectives.

As part of this effort, the MPO has accomplished the following during the reporting period:

- Presented the scope of the planning effort to regional decision makers in multiple venues:
- City of Corpus Christi City Manager and Senior Leadership (3/2/15)
- Corpus Christi City Council (3/10/15)
- City of Portland City Manager and Director of Engineering (3/19/15)
- Corpus Christi Chamber of Commerce Infrastructure Committee (4/10/15)
- Coastal Bend Bays Foundation (4/13/15)
- Mayor's Fitness Council (scheduled 6/11/15)
- Created a multi-faceted Stakeholder Engagement Plan those details strategies for engaging plan users (i.e., municipalities and other entities that will support the construction of facilities specified in the plan) as well as a diversity of facility users (e.g., students, commuters, casual recreational riders.)

- Established a Steering Committee comprising delegates from 22 entities that are considered plan entities. The first meeting of this body was held on April 15, 2015.
- Established dedicated Web portal (www.CoastalBendInMotion.org) to facilitate stakeholder engagement in the planning process.
- Established three primary tools for virtual data collection, all of which are functional and are yielding high volumes of quality data about stakeholder priorities:
- On-line mapping tool to capture where users ride or where they would like to ride if the conditions for cycling improved.
- Downloadable SmartPhone application that allows users to log real-time data about their rides.
- On-line survey about riding habits, needs and perceived obstacles to cycling as transportation.
- Leveraged financial contribution from the Corpus Christi Regional Transportation Authority to support consultant to provide technical assistance in implementing direct (in-person) stakeholder engagement.
- Leveraged financial contribution from City of Corpus Christi to support consultant in providing technical assistance to the MPO with demand modeling and bike facility selections.
- Created geo-spatial (Geographic Information Systems) database with individual data layers for variables that will inform bike facility network development (e.g., origin/destination data at the Traffic Analysis Zone (TAZ) level, location of key people generators, including employment centers, shopping hubs, health care facilities, groceries and markets, transit stops, academic institutions, etc.)

Status of Education Efforts Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward. In July of 2014 and May 2015, the Chair sent electronic communications to the over 100 participants in the Group that provided instructions on how to register for AirNow alerts and forecasts. Also included in the communication were numerous prepared scripts for emission reduction recommendations that could be easily forwarded, or mass emailed should an AirNow alert be received.

Status of Announcing Emission Reduction Funding Opportunities Commitment for Year 1

The commitment has been met within the schedule stated in the Path Forward Plan. Notification to the Group for DERA projects were submitted in May, August, and September of 2014. A letter of support from the Group was provided in December 2014 to the Port of Corpus Christi for a DERA project application. There were no TERP funds available for this reporting period. A Clean School Bus application notification was distributed to the Group in August.

Status of Van Share Promotion Commitment for Year 1

The commitment has been met and within the schedule stated in the Path Forward. The Regional Transportation Authority (RTA) was an invited speaker at the July 2014 Group meeting where over 15 industrial and major employers were represented. The RTA representative provided Van Pool registration information for worksites. An e-mail was sent to the over 100 Group members that provided the RTA presentation, contact information for the representative and encouragement to schedule a workplace appointment for the representative. In November 2014, the RTA representative was included in a presentation to the San Patricio County Regional Development Corporation regarding the air quality impact of numerous industrial facilities seeking to locate to the area and traffic management plan encouragement for the several hundred workers that will be commuting to the facilities.

This appendix reflects the major highlights of the Year 1 Ozone Advance Report submitted to EPA. To view the complete Year 1 Annual Report including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX C

ANNUAL REPORT FOR YEAR 2 ACTIVITIES May 2015 – May 2016

APPENDIX C

ANNUAL REPORT FOR YEAR 2 (May 2015 – May 2016)

Status of Establishing Air Quality Position and Program Commitment for Year 2

Numerous efforts to meet the commitment and obtain funding for a position that delivers a community-wide education campaign in Year 2 were unsuccessful. The Chair of the Group performed several searches for grants available and studied numerous grant announcements in search of funding for an air quality education position or campaign. The only possible funding source found during these searches was Congestion Mitigation federal funding or CMAQ. A telephone call to a CMAQ funding representative confirmed that at present, CMAQ funding is currently available for areas in non-attainment of ozone standards only.

This commitment has not been met. Despite a concerted effort in Years 1 and 2 to identify funding for a dedicated fulltime position to deliver community-wide air quality education programs, the position was not funded in Year 1 or Year 2 and therefore not established. The Group met their commitment in Year 1 and Year 2 commitment to search out funding possibilities through stakeholders, potential sponsors, and grants to secure funding for a position that delivers a community-wide ozone education campaign. There is no indication through the many Year 1 and Year 2 grant searches, studies of grant announcements and meetings with local stakeholders that funding for this full-time position and program will become available. There were however, opportunities for no-cost public education tools and outlets identified and offered during these meetings such as newsletters, Face Book, Twitter feeds and distribution pieces that could be made available to provide air quality community education.

Education Path Forward for Year 3

The Chair of the Group will meet again with local entities that offered no-cost public education opportunities and work to implement these opportunities. These opportunities include contributing to Corpus Christi Chamber of Commerce newsletters that go out to over 400 local businesses about emissions reductions, including air quality messages in the Local Emergency Planning Committee (LEPC) info-line, investigating air quality messages to be included in LEPC reverse alert telephone and text notifications on elevated ozone days, contributing to LEPC Twitter and Face Book postings, participation in Corpus Christi Regional Economic Development Corporation welcome packages distributed to new businesses, and providing ozone notification tools and prepared messages to local meteorologists and the local newspaper (Corpus Christi Caller-Times). The Chair will also work with stakeholders to prepare an electronic presentation about air quality and emissions reduction recommendations that can be utilized by community, industry, local government, and business speakers. In addition, the Chair will continually review the EPA website found at <https://www.epa.gov/education> for resources such as school flags, digital distribution pieces and more for community education opportunities.

Status of Air Quality Curricula for Year 2

The commitment has been met and within the committed schedule. During Year 2, area industry (Citgo, Flint Hills Resources, Valero) funded the development of the curricula, the presenter, and learning prizes for students. In Year 2, the curricula was delivered to 7 classes in 2 elementary schools. A total of 175 students received the curricula. Students were pretested on air quality and emission reduction recommendations before receiving the lessons and post tested after receiving the lessons. An improvement of over 50% in pre and post test scores was realized in most classes.

Air Quality Curricula Path Forward for Year 3

Area industry (Citgo, Flint Hills Resources, Valero) has provided funding for the air quality curricula to continue into the Fall 2016 school session.

Status of Research, Modeling and Monitoring Commitment for Year 2

The commitment has been completed and within the schedule stated in the Path Forward Plan. Continuous monitoring of ozone and prevailing meteorological conditions including resultant wind speed, resultant wind direction, outdoor temperature and relative humidity was conducted during Year 2 at CAMS 659 – Aransas Pass (Upwind site); CAMS 660 – Holly road (Urban site); CAMS 664 – Violet (downwind site) and CAMS 686 – Odem. During 2015, the downwind site – Violet (CAMS 664) recorded fourth highest daily maximum eight-hour ozone concentration of 69 ppb while CAMS 659 and CAMS 660 recorded 60 ppb. Odem – CAMS 686 located in the San Patricio county recorded the lowest fourth highest daily maximum eight-hour ozone concentrations of 59 ppb during 2015. On May 1, 2015 daily maximum eight-hour ozone concentrations exceeding current NAAQS of 70 ppb were recorded at compliance grade monitoring stations CAMS 04 and CAMS 21 as well as research grade monitoring stations including CAMS 659, CAMS 660 and CAMS 664. The downwind site recorded two episode days during October 2015. Additional data analysis is being performed to study the prevailing meteorological conditions as well as diurnal and seasonal trends.

Status of NO_x Monitoring Commitment for Year 2

The commitment has been completed and within the schedule stated in the Path Forward Plan. The continuous monitoring of oxides of nitrogen was conducted at CAMS 660 – Holly road site during April 1, 2015 through October 31, 2015. Daily maximum one hour NO_x concentrations ranging between 1.2 ppb to 15.1 ppb were recorded during ozone season of 2015 while daily maximum one hour NO_x concentrations were observed to range between 0.7 ppb to 6.8 ppb. An episode day was conducted to study the trends of NO_x concentrations during ozone seasons of 2014 and 2015 along with identification of episode days with high ozone and NO_x concentrations for further assessment of prevailing meteorological conditions and diurnal trends. During days with elevated NO_x concentration, dominant contribution from east, southeast and southwest wind sectors was noted along with significant contribution from the North and Northwest sectors. The diurnal time series analysis conducted during the high NO_x episode days indicated elevated concentrations during early morning, midafternoon and late evening is contributed primarily by local rush hour traffic.

Status of Commitment to Upgrade Model for Year 2

The commitment has been completed and within the schedule stated in the Path Forward Plan. The Quality Assurance Project Plan (QAPP) was developed to update the conceptual modeling report through 2014. The QAPP has been submitted and approved by TCEQ's technical committee. Following the protocol of QAPP, a conceptual modeling report for the urban airshed has been updated through 2014. As shown by the data analysis in the conceptual modeling report, Corpus Christi is in attainment with the current Ozone NAAQS by a slight margin. The compliance grade TCEQ monitoring stations (CAMS 04 and CAMS 21) and research grade UNT-TAMUK maintained monitoring stations upwind site – CAMS 659 (Aransas Pass); urban site – CAMS 660 (Holly road site) and Odem site – CAMS 686 recorded one to three episode days with daily maximum eight-hour ozone concentration exceeding NAAQS. The downwind site – CAMS 664 recorded up to 6 episode days exceeding current NAAQS of 70 ppb. Additional analysis assessing the prevailing meteorological conditions during the identified episode days along with twenty-four-hour backward trajectory analysis to locate the probable regional source contributors was performed.

Status of Updating Ozone Attainment Status Commitment for Year 2

The commitment to update ozone attainment status has been completed within the schedule stated in the Path Forward Plan. Ozone concentrations and meteorological conditions including resultant wind speed, resultant wind direction, outdoor temperature and relative humidity measured at compliance grade monitoring stations including CAMS 04 and 21 maintained and operated by TCEQ and research grade monitoring stations CAMS 660, CAMS 659, CAMS 664 and CAMS 686 maintained and operated by UNT-TAMUK are being used to update the existing conceptual modeling report. The conceptual modeling report will be submitted to TCEQ's technical committee for review and approval. Continued decrease in the ozone design values has been noted at both the compliance and research grade monitoring stations. During 2015, the fourth highest eight-hour ozone concentrations of 59 ppb, 69 ppb, 60 ppb and 60 ppb were recorded at CAMS 686, CAMS 664, CAMS 660 and CAMS 659, respectively.

Path Forward for Year 3 and 4

Through TCEQ funding provided by the 84th Texas Legislature, the City of Corpus Christi has secured \$405,243 in funding for a two-year work plan for Years 3 and 4 (May 2016-May 2018) to continue air monitoring, research, and the Clean Fleet program. Funding was insufficient to provide modeling activities.

Status of AutoCheck/Clean Fleet Vehicle Emissions Testing and Repair Commitment for Year 2

The Clean Fleet commitment was met and within the stated schedule for Year 2. The Pollution Prevention Partnership and AutoCheck Program held 31 events since May 2015, testing public and fleet vehicles for emissions. A total of 470 vehicles were tested for emissions, 15 vehicles were identified as highly polluting and 40 gas caps were identified as leaking and needing replacement. Approximate emissions reductions as a result of documented repairs and gas cap replacement is 0.01 tons per year of NOx and

1.2 tons per year of HC. The Pollution Prevention Partnership also made numerous presentations to local agencies and community groups about ozone, health, and encouraging emission reducing activities. Groups included Flint Hills Environmental, Health, Safety Fair, and the Moody High School AP Environmental Science Class. Pollution Prevention Partnership also estimated the composition of the Nueces and San Patricio County Alternative Fuel light vehicle fleet and created models of emission reduction gains by various alternative fuel technology adoption scenarios. The presentation was delivered to the air quality group and made available through the Pollution Prevention Partnership web site. Four hundred twenty (420) presentations and documents about ozone reduction, alternative Fuels, and alternative transportation were downloaded onto the Pollution Prevention Partnership website and there were 5,281 other page hits. The Pollution Prevention Partnership website can be found at <http://outreach.tamucc.edu/p3/>.

Path Forward for Clean Fleet for Year 3

A minimum of one Auto Check/Clean Fleet event will be held each month beginning in January 2016 to test an average of 20 vehicles per month for the period of January 2016 through December 2017. Pollution Prevention Partnership (P3) will make every effort to ensure that at least half of all vehicles tested are private, non-fleet vehicles. In the event that a scheduled event is cancelled, it will be rescheduled. If it is rescheduled to a different month, both it and the event scheduled for that month will be performed. The Auto Check/Clean Fleet program will measure vehicle emissions from area public and private fleets for hydrocarbons and NOX; coordinate emission reducing repairs for identified polluting fleet vehicles; re-test the emissions of each repaired vehicle; calculate and quantify emissions reductions as a result of repairs; and enter all information for all tested vehicles (“clean” and “dirty”) into an excel spreadsheet to be sent to the TCEQ with quarterly reports. The Pollution Prevention Partnership will attend or facilitate meetings for/with local governments, businesses, citizens groups, industry groups, and environmental groups to promote air pollution reduction strategies. A presentation about local air quality including emissions reduction strategies and community outreach programs (such as the Auto Check/Clean Fleet events) will be created to be given at these meetings where appropriate. The Pollution Prevention Partnership will maintain a public website/web page to facilitate public access to air quality information and outreach programs and will report on the analytics of website/web page traffic. The website will include the following information:

- current air quality information for the Corpus Christi area
- copies of technical reports
- copies of presentations
- emissions, reduction strategies
- outreach event information

Status of use of IR Camera Commitment for Year 2

The commitment has been met and within the schedule stated in the Path Forward Plan. Several area industrial facilities utilized IR cameras to detect fugitive emissions in Year 2.

Status of CCAD Notification on Ozone Action Days Commitment for Year 2

There were no Ozone Action Days during Year 2, however the CCAD communication system was set up and ready to launch should an Ozone Action Day occur.

Status of Production of LRVP Commitment for Year 2

The commitment has been met and within the schedule stated in the Path Forward Plan. Several area facilities produced LRVP gasoline in Year 2.

Status of Operation of Public Use CNG Fueling Facilities Commitment for Year 2

The commitment has been completed and ahead of the schedule stated in the Path Forward Plan. The City of Corpus Christi is currently constructing a new public CNG station. This will give the Gas Department two CNG stations for City use only and two available for the public. Approximately 20-25 CNG vehicles were purchased in FY 15, with orders currently being taken for FY16. City departments are encouraged to consider purchasing CNG vehicles as needed.

Path Forward for CNG Fueling for Year 3

CNG will continue to be considered for all new vehicle purchases at the City. The City is also considering building a CNG station in Flour Bluff.

Status of USPS Installation of CNG Fueling Facility for Year 2

The commitment has not been met. Unfortunately, the USPS has decided not to pursue the CNG facility at this time, and no additional CNG vehicles were purchased. No plans to install this station in 2016 have been identified.

Path Forward for CNG for Year 3

The City will continue to encourage its partners to consider CNG vehicles.

Status of RTA Commitment to Purchase CNG Vehicles for Year 2

The commitment has been met and ahead of the schedule stated in the Path Forward Plan. The CCRTA replaced 15 diesel-fueled buses with 15 CNG buses in Year 2.

Status of Bicycle Transportation Planning Commitment for Year 2

The commitment continues to exceed its tasks and activities as stated in the Path Forward Plan.

The Bicycle Mobility Plan was completed in December of 2015 and delivered to the City of Corpus Christi and the City of Portland in February of 2016. This new plan prescribes:

- Where (i.e., on which corridors/segments), in the urbanized area of Nueces and San Patricio counties, should bike facilities be installed to create a cohesive bicycle mobility network that connects key destinations, to functionally expand the reach of the transit network and to accommodate a diversity of riders.

- What type of infrastructure (i.e., on-street bike lanes, separate cycle tracks, etc.) should be installed on each segment of the 290-mile network to uphold the level of safety to which the community aspires.
- How (i.e., to what national standards) should those bicycle facilities be designed and maintained.

The plan also includes over 60 best practice recommendations related to:

- Priorities for trip support facilities (i.e., racks, public repair stations, lockers, bike share infrastructure, wayfinding), education and encouragement programs for promoting safe biking culture and awareness.
- Policy and code reform programs (i.e., roadway maintenance, safe passage).
- Program evaluation to track progress against regional bicycle mobility and safety goals and objectives.

For each strategy, the plan included a suggested lead entity, potential partners, and relative priority and cost. The 10-month planning effort that yielded the Bicycle Mobility Plan included extensive, multi-pronged stakeholder engagement:

- 4 meetings of Project Steering Committee (20+ member body representing municipalities and other entities that will ultimately help implement the plan)
- Project website: www.CoastalBendInMotion.org that includes tools for virtual engagement.
- 205 MAP IT routes by 84 discrete users
- 300+ discrete users logged routes via TRACK IT smartphone app.
- 220 on-line ANSWER IT survey responses
- 12+ presentations by MPO Director or staff
- 15 public events attended by consulting team.
- 46 key interviews conducted.
- 900+ leaflets/posters distributed.
- 5 focus groups conducted (industry, business owners, design engineers, Regional Transportation Authority operators and Corpus Christi Police Department).

Information gathered revealed that on average, most individual residences in the metropolitan area of Nueces and San Patricio counties are within a two to five minute bike ride (on a neighborhood street) from some segment of the network, and the network delivers riders within ¼ mile of:

- 158 of 178 (89%) early education and daycare centers, grade schools (public and private) and higher education campuses
- 122 of 143 (85%) parks over two acres in size
- 104 of 130 (80%) groceries, meat and fish markets, bakeries, and corner markets
- 541 of 657 (82%) low-income housing units (Section 8 or Housing Tax Credit properties)
- 1088 of 1319 (83%) transit stops and stations.
- 186 of 242 (77%) pools, senior centers, recreation centers, movie theaters, community pools, fitness centers, museums, and hotels.

Based on feedback gathered from the community through interviews, focus groups, and on-line tools, the planning team prioritized a low-stress rider experience and maximal separation between cyclists and cars by using off-road trail segments on storm water easements wherever possible. Where the bike network corresponds to the street network, the planning team prioritized neighborhood streets with low traffic volumes and speeds. Where the network falls on busier roads, the Plan prescribes alternatives to the standard on-street bike lane, such as separated multi-use paths or protected cycle tracks. The Plan can be viewed at <http://online.fliphtml5.com/dnvt/ldqv/>. Maps included in the Plan can be viewed at <https://ccmpo.maps.arcgis.com/apps/webappviewer/index.html?id=fd393dbf23c645f89180a818476354a7>.

Path Forward for Bicycle/Mobility Planning for Year 3

Strategic Plan for Active Mobility

- Final design and initiation of construction of Bond 2012 and 2014 roadway projects will yield the implementation of separated cycling infrastructure (one-way protected cycle tracks adjacent to the sidewalk on both sides of the street) on around a dozen miles of roadway.
- Planning for implementation of various bicycle and pedestrian projects funded through the MPO's Transportation Alternatives program.
- Creation of various working products related to pedestrian mobility as preliminary steps in subsequent phases of the Strategic Plan for Active Mobility.

Status of Education Efforts Commitment for Year 2

The commitment has been met and within the schedule stated in the Path Forward Plan. In September 2015, communications were sent to the Group that included instructions on how to register for AirNow alerts and forecasts. Also included in the communication were numerous prepared scripts for emission reduction recommendations that could be easily forwarded or mass emailed. Incoming new industry representatives were added to the Corpus Christi communication list and included in all Group communications.

Path Forward for Education Efforts for Year 3

The Chair of the Group will continue to communicate, promote, and encourage all participants and their workplaces to take advantage of the many EPA education and outreach resources for air quality including Enviroflash, AirNow, social media messaging, brochures, posters, anti-idling program templates, and more.

Status of Announcing Emission Reduction Funding Opportunities Commitment for Year 2

The commitment has been met within the schedule stated in the Path Forward Plan. A notification was circulated to the Group about Federal funding opportunities for emissions reductions programs on May 2, 2015 and another notification was circulated on May 13, 2015, for TERP funding opportunities.

Status of Van Share Promotion Commitment for Year 2

The commitment has been met and within the schedule stated in the Path Forward Plan. An e-mail was sent to the over one hundred (100) Group members in September 2015,

that provided the RTA presentation, contact information for the representative and encouragement to schedule a workplace appointment for the representative. In Year 2, two (2) companies utilized vanpools with a total of two (2) vanpools at Port Royal Condominiums and four (4) vanpools at TPCO; a pipe manufacturing facility under construction.

This appendix reflects the major highlights of the Year 2 Ozone Advance Report submitted to EPA. To view the complete Year 2 Annual Report including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX D

ANNUAL REPORT FOR YEAR 3 ACTIVITIES May 2016 – May 2017

APPENDIX D

ANNUAL REPORT FOR YEAR 3 (May 2016 – May - 2017)

Status of Establishing Air Quality Position and Program Commitment for Year 3

This commitment has been met and within the committed schedule. During May 2016-May 2017, the Chair continued work with stakeholders to provide no cost opportunities to educate the public about Corpus Christi air quality. The Pollution Prevention Partnership at Texas A&M University-Corpus Christi developed a website that provides air monitor links, daily updated air quality information, emission reduction recommendations, elevated ozone day health tips, and more. The site is continuously updated and can be found at <http://outreach.tamucc.edu/p3>. The Port of Corpus Christi provided staff time and expertise to establish a Facebook site as well as twitter feeds for the Group programs and messaging. The Facebook site can be found at <https://www.facebook.com/ccairquality/>. The Corpus Christi Chamber of Commerce provided air quality messages to over 400 members and distributed an emissions reductions list to its members. The Corpus Christi Regional Economic Development Corporation and the San Patricio Economic Development Corporation both began providing a document to newly sited businesses in the area that encourages the business to attend Group meetings and provides emissions reductions information. The Local Emergency Planning Committee (LEPC) committed to providing information on their info-line, and provides reverse alert telephone calls and text messages on ozone action days. The Corpus Christi newspaper (Corpus Christi Caller Times) included daily air quality information on their weather page and the Chair provided air quality information to the local television meteorologists.

Education Path Forward for Year 4

The Chair will continue to work with stakeholders to provide no-cost education opportunities and outlets. The Facebook site, webpage, twitter communications, welcome packages and newsletter contents and distributions will be updated. The Chair will continue to review the EPA website found at <https://www.epa.gov/education> for resources such as school flags, digital distribution pieces and more for community education opportunities and share those opportunities with stakeholders. The Chair will continue to distribute the emissions reductions recommendations and checklist to all stakeholders.

Status of Air Quality Curricula for Year 3

The air quality curricula commitment was met and within the committed schedule. The curricula was delivered to 23 5th grade classes at 4 elementary schools. A total of 569 students received the curricula. Students were tested on air quality and emission reduction recommendations knowledge prior to and after receiving the lessons. Prior to receiving the lessons, students tested correctly an average of 5 questions out of a possible 10. After receiving the lessons, students tested correctly an average of 9 questions out of a possible 10.

Path Forward Air Quality Curricula for Year 4

Area industry is considering funding the air quality curricula to continue in Year 4.

Status of Research, Modeling and Monitoring Commitment for Year 3

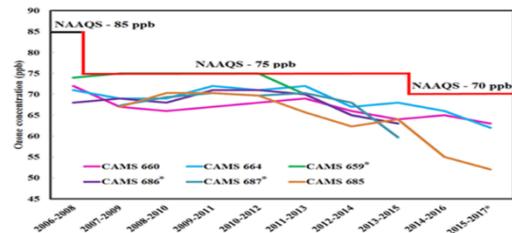
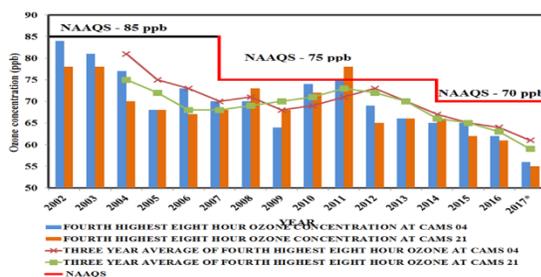
With budget constraints in funding provided by the 84th Texas Legislature, the below research grade monitoring stations were deactivated on May 31, 2016.

- Upwind site in Aransas Pass County – CAMS 659
- Odem monitoring site in San Patricio County – CAMS 686

A quality assurance project plan (QAPP) for maintenance and operation of three research grade monitoring stations including (1) Urban site – CAMS 660, (2) Downwind site – CAMS 664, and (3) Ingleside site – CAMS 685 as shown below was submitted and approved by TCEQ on May 16, 2016. The monitoring commitment for Year 3 was met and will continue beyond the stated schedule. Each of the research monitoring stations (CAMS 660, 664, and 665) was equipped with an ozone analyzer; weather sensors including RM Young wind sensor and coastal environmental temperature and humidity sensor; zeno data logger and Enfora wireless modems. Continuous measurements of ozone, wind speed, wind direction, outdoor temperature, and relative humidity were recorded at each of these stations and using the TCEQ LEADS acquisition system data was made publicly available on TCEQ's website. Additional continuous monitoring of oxides of nitrogen (NOx) was performed during this time at Holly Road monitor (CAMS 660).

Status of Research; Updating Ozone Attainment Status Commitment for Year 3

The commitment to update the ozone attainment status has been met and beyond the stated schedule. The design value trend of ozone concentrations measured at TCEQ maintained compliance grade monitoring stations and TAMUK/UNT maintained research grade monitoring stations are shown in below figures.



As demonstrated by the design value trends, a decreasing trend in ozone concentration has been noted at both TCEQ maintained compliance grade monitoring stations as well as research grade monitoring stations maintained and operated by TAMUK/UNT. During May 16, 2016 through April 7, 2017 highest daily maximum eight-hour ozone concentrations of 64 ppb and 61 ppb were measured at CAMS 04 (February 22, 2017) and CAMS 21 (October 11, 2016) on February 22, 2016 and October 11, 2017,

respectively. The research grade monitoring stations also measured highest daily maximum eight-hour ozone concentrations of 73 ppb at Urban site - Holly road – CAMS 660 (September 29, 2016), 70 ppb at downwind site – Violet – CAMS 664 (October 11, 2016) and 55 ppb at Ingleside site – CAMS 685 (September 2, 2016). Additional monitoring of oxides of nitrogen was conducted at Holly road – CAMS 660 during ozone season of 2016. With QAPP approved by TCEQ on May 16, 2016 measurements of oxides of nitrogen was conducted from June 1, 2016. Measurements were not acquired during June 28 through July 13, 2016 due to failure of the reaction chamber. The analyzer was sent to the technician for replacement of reaction chamber and calibration. The analyzer was setup at Holly road on July 13, 2016 for continuous measurement of ozone precursor. Highest maximum NO and NOx concentrations were measured in October 2016 (3.29 ppb of NO – October 26, 2016 and 8.81 ppb of NOx – October 22, 2016).

Looking Ahead; Updating Ozone Attainment Status for Year 4

Continuous monitoring of ozone and meteorological parameters will be conducted at urban site – CAMS 660; downwind site – CAMS 664 and Ingleside site – CAMS 685. The data will be made available to local stakeholders, policy makers, local communities, and other researchers through TCEQ's website. Additional monitoring of oxides of nitrogen also will be conducted during the ozone season (April 1 through October 31) at urban site – CAMS 660.

Status of AutoCheck/Clean Fleet Vehicle Emissions Testing and Repair Commitment for Year 3

The Clean Fleet commitment exceeded commitments and beyond the stated schedule. The Pollution Prevention Partnership (P3) became an EPA SmartWay® Affiliate in November 2016. SmartWay Partnerships between carriers, shippers, and logistics companies have been promoted in several venues: Group, Nueces County Community Action Agency-Health Advisory Meeting, CC Regional Transportation Authority-Policy Meeting and Texas-Freight Advisory Committee Regional Workshop. SmartWay information and links have been included on the P3 Website. SmartWay partners track and improve fuel efficiency, reducing emissions including NOx, a precursor of ground-level ozone. P3 CleanFleet and AutoCheck programs held 70 events from May 2016 to March 30, 2017, testing 630 public and fleet vehicles for emissions. Fifty (50) vehicles were identified as highly polluting and 31 gas caps were identified as leaking and needing replacement. Approximate emissions reductions as a result of documented repairs with post-test and gas cap replacement is 0.15 tons per year of NOx and 7.07 tons per year of HC. P3 also presented at or attended 18 meetings and health fairs at local agencies and community events to educate and encourage emission-reducing activities. Over 3,700 people were addressed. Some of the groups addressed were Nueces County Safe Communities Coalition, Nueces County Community Action Agency-Health Advisory Meeting, LEAD First Foundation and Superior Health Plan health fair, Solomon Coles school, Head Start, Girls in Engineering Math and Science Conference and three Head Start parent groups. The web content for P3 was expanded to include a SmartWay page. Four hundred sixty-five (465) presentations and documents about ozone reduction, alternative fuels, and alternative transportation were downloaded from the P3 website and

there were 6,791 other page hits. The P3 website can be found at <http://outreach.tamucc.edu/p3/>.

Path Forward for Clean Fleet for Year 4

P3 will continue to promote SmartWay Partnerships between the freight industry and EPA. In addition to addressing groups, P3 will contact specific shippers and carriers to promote the business benefits of fuel efficiency and emissions reduction.

Ozone awareness and reduction strategies, education, and outreach will continue through presentations and facilitation of meetings for/with local governments, businesses, citizens groups, industry groups, and environmental groups to promote ozone and precursor reduction strategies.

P3 will continue to host CleanFleet and AutoCheck events at least once per month testing for emission problems. Repair subsidies will continue as long as funding is available.

Educational materials in presentations, print and online will be expanded to include greenscaping practices that reduce lawn maintenance requirements. Less lawn maintenance reduces ozone precursors and acute exposure of operators to toxic emissions.

P3 will plan and begin implementation of a media campaign coinciding with the 2017 Ozone season (April-October). Press releases, social media, and free PSA spots will be used when possible. Pending budget approval, paid outdoor and radio advertising could be used. Gas stations will be asked to participate in the media campaign to promote ozone actions.

P3 will implement one Lawn Equipment Exchange Program in which the public will trade-in working gasoline powered equipment for discounts on electric equipment. Trade-in equipment will be drained of fluids and recycled.

An SEP proposal to TCEQ is pending approval. The proposal, if approved, will expand the AutoCheck emissions screening and repair protocol to include some Standard On Board Diagnostic (OBD-II) Diagnostic Troubleshooting Codes (DTC). This expansion would allow repairs of malfunctioning systems not currently identified for repair by tailpipe screening alone. Further reduction in NOx and HC can be achieved by repairing OBD-II identified malfunctions such as the evaporative control system, mass airflow sensors, emission gas recirculation (EGR) valves, misfires, and lean conditions.

Status of use of IR Camera Commitment for Year 3

The commitment has been met and beyond the stated schedule in the Path Forward Plan. Industry continued the use of IR cameras to detect fugitive emissions in Year 3.

Path Forward for IR Camera Commitment for Year 4

Industry plans to continue the use of IR cameras to detect fugitive emissions in Year 4.

Status of CCAD Notification on Ozone Action Days Commitment for Year 3

There were no called Ozone Action Days during Year 3, however the CCAD communication system was set up for an Ozone Action Day.

Path Forward for CCAD Notification for Year 4

CCAD will continue to provide all employees with notifications when Ozone Action Days are declared and offer voluntary actions to take during and after work periods.

Status of Production of LRVP Commitment for Year 3

The commitment has been met and gone beyond the schedule stated in the Path Forward Plan. Several area facilities continued to produce LRVP gasoline in Year 3.

Path Forward for LRVP Year 4

Industry plans to continue to produce LRVP in Year 4.

Status of Operation of Public Use CNG Fueling Facilities Commitment for Year 3

The commitment is completed and beyond the schedule stated in the Path Forward Plan. The City continues to consider replacing gasoline fueled vehicles with CNG equivalents. The City purchased twenty (20) CNG bi-fuel and dedicated vehicles in 2016.

Path Forward for CNG Year 4 (May 2017-May 2018)

The City is considering building additional CNG stations in Flour Bluff and Annaville, which are areas within the city's limits.

Status of USPS Installation of CNG Fueling Facility for Year 3

Due to funding issues, the project has been postponed.

Looking Forward to CNG for Year 4

The city will continue to encourage its partners to consider CNG vehicles.

Status of RTA Commitment to Purchase CNG Vehicles for Year 3

The commitment has been exceeded and ahead of the schedule stated in the Path Forward Plan. During Year 3, the CCRTA purchased 11 CNG buses (35') and 7 CNG Cut-away buses (around 22' - 24' - mostly used in the paratransit division). The CCRTA also purchased 13 electric relief vehicles (Ford Escorts).

Status of Bicycle Transportation Planning Commitment for Year 3

The Bicycle and Mobility Planning Commitment continues to exceed commitments and scheduling stated in the Path Forward Plan.

Strategic Plan for Active Mobility, Phase I – Bicycle Mobility was adopted by the City of Corpus Christi in May 2016.

Program (TAP) funds for implementation of bicycle and pedestrian projects in FY2017 and FY2018 as summarized in the following table.

	AGENCY	PROJECT NAME	TOTAL PROJECT COST
FY 2017	City of Corpus Christi	Region-wide Bike Boulevard Wayfinding Initiative	\$522,500
	City of Portland	Portland Bicycle Lanes	\$359,878
FY 2018	City of Corpus Christi	Safe Shelter and Crossing Program	\$168,520
	City of Portland	Memorial Parkway Hike & Bike Phase 1	\$342,106

City of Corpus Christi funded the development of roadway standard design details to facilitate consistent and effective implementation of bicycle mobility infrastructure in various roadway projects.

Design completed for approximately 12 miles of 1-way, protected cycle tracks as part of Bond 2012 and Bond 2014 projects.

City of Corpus Christi initiated a collaborative Branding and Design Study to define wayfinding and signage standards for the Bicycle Mobility Network (as in-kind match for an MPO Transportation Alternatives Program grant to fund the implementation of approximately 30 miles of bicycle boulevards).

The City of Corpus Christi completed a 1.25-mile section of the Schannen Ditch off-road multi-use path (supported in part with Transportation Alternatives Program funds from the MPO).

Corpus Christi RTA used MPO Transportation Alternative Program funds to purchase the following for installation at RTA transit stops within the MPO Boundary:

- 1,000 bicycle racks (varying capacities)
- 15 bicycle lockers
- 150 free standing public air pumps
- 65 freestanding public “FixIt” stations

MPO staff, with guidance from Strategic Plan for Active Mobility steering Committee, produced multiple pedestrian mobility planning working products and provided technical assistance with the planning of pedestrian elements in City of Corpus Christi roadway projects

Path Forward for Bicycle and Mobility Planning for Year 4

Strategic Plan for Active Mobility:

- Construction of Bond 2012 and 2014 roadway projects, including around 12 miles of protected 1-way cycle track, will continue.

- City of Corpus Christi will complete the collaborative Branding and Design Study to define wayfinding and signage standards for the Bicycle Mobility Network.
- City of Corpus Christi will use Transportation Alternatives Program funds from the MPO to implement around 30 miles of Bicycle Boulevards.
- City of Corpus Christi will use Transportation Alternatives Program funds from the MPO to begin installation of a HAWK pedestrian crossing at Cole Part, a key Bayfront destination.
- City of Portland will use Transportation Alternatives Program funds from the MPO to begin installation of around three miles of Buffered Bicycle Lanes.
- City of Portland will use Transportation Alternatives Program funds from the MPO to begin construction of Phase I of the Memorial Parkway off-road multi-use path.
- RTA will install bicycle trip support hardware purchased in Year 3 using Transportation Alternatives Program funds from the MPO.

Status of Education Efforts Commitment for Year 3

The commitment has been met and beyond the schedule stated in the Path Forward Plan. SmartWay, AirNow, Enviroflash, anti-idling and other initiatives were included in an emissions recommendation list that was distributed to the Group and other stakeholders in July and October 2016 and January and April 2017.

Path Forward for Education Efforts for Year 4

The Chair will continue to communicate, promote, and encourage all participants and their workplaces to take advantage of the many EPA education and outreach resources for air quality, including Enviroflash, AirNow, social media messaging, brochures, posters, anti-idling program templates and more.

Status of Announcing Emission Reduction Funding Opportunities Commitment for Year 3

The commitment has been met and went beyond the schedule stated in the Path Forward Plan. TCEQ Texas Emissions Reductions Program (TERP), DERA, and other TCEQ and EPA applications including the SmartWay program for funding opportunities were communicated to the Group in July 2016, October 2016, January 2017, and April 2017 of Year 3. A special presentation by Trent Thigpen (P3 Project Manager) was made at the October 28, 2016 Group meeting encouraging members to become SmartWay members. SmartWay and other initiatives are also included in the emissions recommendation list that is distributed to the Group and other stakeholders.

Path Forward for Announcing Funding Opportunities for Year 4

The Chair will go beyond the schedule stated in the Path Forward Plan and continue to inform the Group and other stakeholders of emission reduction funding opportunities.

Status of Van Share Promotion Commitment for Year 3

The commitment was exceeded and beyond the schedule stated in the Path Forward Plan. Registering with the RTA Van Pool program including contact information was

included in an emissions reductions summary and checklist that was distributed to the Group in addition to other stakeholders April, July, and October of 2016 and in January and April 2017 during Year 3.

The RTA Van Pool Program had a total of 14,157 riders making 4,376 trips for a total of 201,430 miles in 8 vehicles, thereby removing thousands of vehicles from the road during Year 3. The following table provide a complete detail of the van-share trips.

This appendix reflects the major highlights of the Year 3 Ozone Advance Report submitted to EPA. To view the complete Year 3 Annual Report including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX E
ANNUAL REPORT FOR YEAR 4 ACTIVITIES
May 2017 – May 2018

APPENDIX E

ANNUAL REPORT FOR YEAR 4 (May 2017 – May 2018)

Status of Establishing Air Quality Position and Program Commitment for Year 4

The Group Facebook ([www.facebook @ccairquality](http://www.facebook.com/ccairquality)) enjoyed 49 likes and 52 followers during Year 4. Average visits to the page were between 4 and 11 daily. The website (www.cctexas.com/planning-esi/environmental-strategic-initiatives-esi/cc-air-quality-group) has enjoyed 78 hits. The Pollution Prevention Partnership Air Quality Website (outreach.tamucc.edu/p3/) enjoyed 10,883 hits during Year 4.

Path Forward for Air Quality Education Efforts for Year 5

The Group will continue to host a Facebook site, a Website, and provide air quality public presentations to community groups, agencies, elected officials, and business leaders. Presentations will also include promoting the use of EPA flags, brochures and other no cost distribution materials.

Status of Air Quality Curricula for Year 4

Industry continued to fund the air quality curricula. The curricula was delivered to a total of 593 5th grade students in 26 classes at 4 schools. Pre and post testing of air quality knowledge was performed on the students prior to and after receiving the curricula. Testing results averaged 5 correct answers out of a possible 10 prior to receiving the curricula and 8 correct answers after receiving the curricula.

Path Forward for Air Quality Curricula for Year 5

Industry will meet to consider funding air quality curricula for Year 5.

Status of Research, Modeling and Monitoring Commitment for Year 4

Each of the research monitoring stations (660, 664, and 685) was equipped with an ozone analyzer; weather sensors including RM Young wind sensor and coastal environmental temperature and humidity sensor; zero data logger and Enfora wireless modems. Continuous measurements of ozone, wind speed, wind direction, outdoor temperature and relative humidity were recorded at each of the stations and using the TCEQ LEADS acquisition system data was made publicly available on TCEQ's website. Additional monitoring of nitrogen oxides was also conducted at CAMS 660 – Holly road during May 1st, 2017 through October 31st, 2017.

Research Accomplishments for Year 4

As demonstrated by the design value trends, a decreasing trend in ozone concentration has been noted at both TCEQ maintained compliance grade monitoring stations (Figure 3) as well as research grade monitoring stations maintained and operated by UNT-TAMUK (Figure 4).

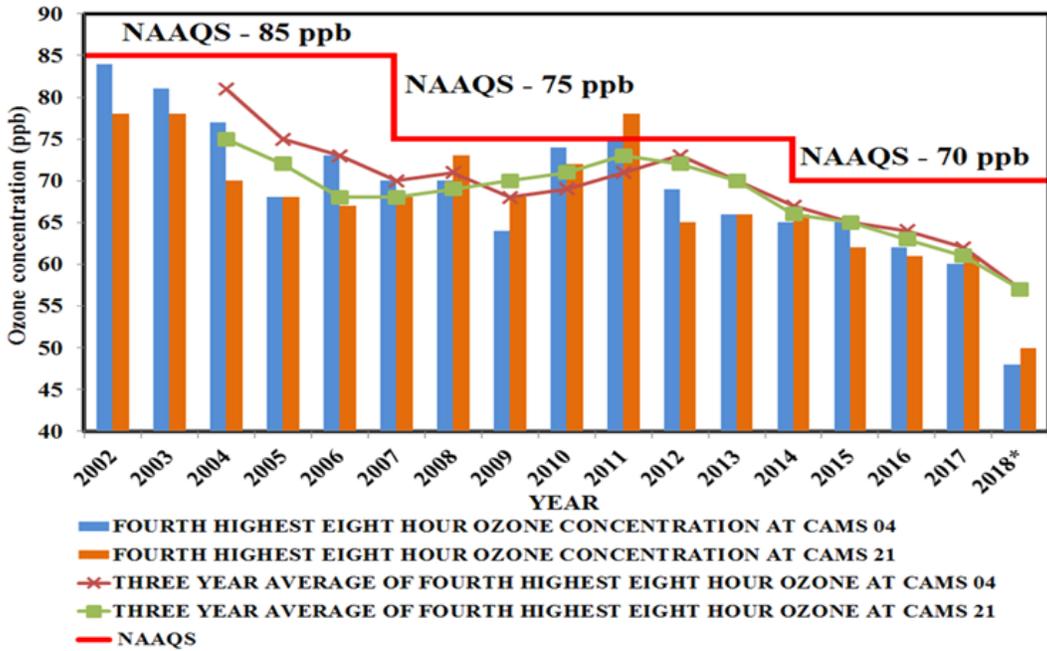


Figure 3. Corpus Christi Ozone Design Trends at TCEQ Regulatory Monitors CAMS 4 and CAMS 21

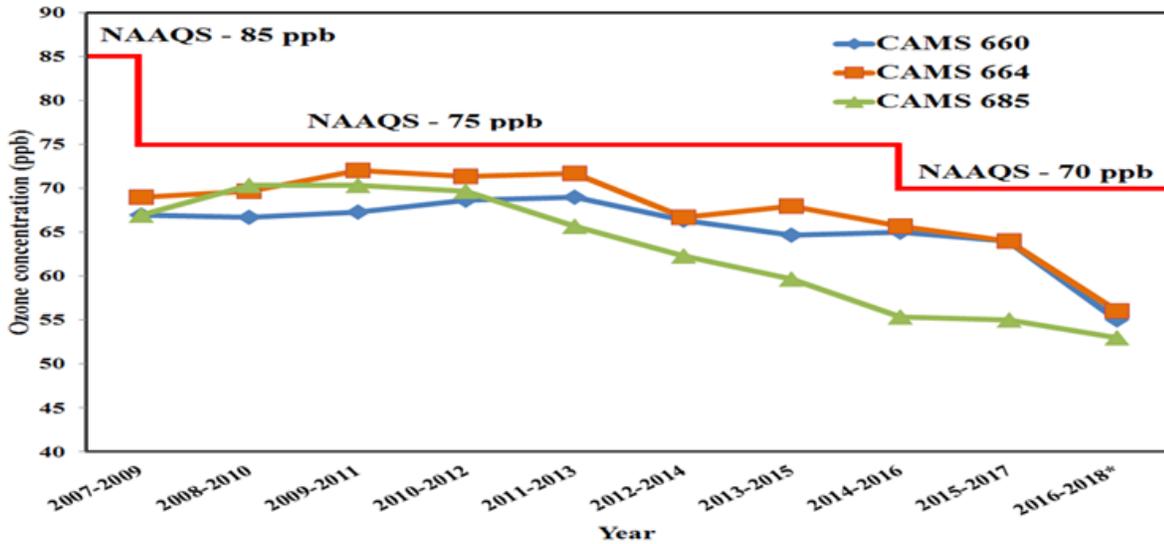


Figure 4. Corpus Christi Ozone Design Trends at TAMUK/UNT Research Monitors CAMS 660, 664, 685
*Deactivated

Daily maximum eight-hour ozone concentrations of 64 ppb were measured at the compliance grade monitoring stations CAMS 04 and CAMS 21 on September 12th, 2017. The research grade monitoring station in urban airshed – CAMS 660 recorded highest daily maximum eight-hour ozone concentrations of 67 ppb on May 24th, 2017 while

downwind site – CAMS 664 recorded 68 ppb on October 18th, 2017 and Ingleside – CAMS 685 recorded 65 ppb on May 6th, 2017.

Additional monitoring of oxides of nitrogen was conducted at Holly road – CAMS 660 during ozone season of 2017. Nitric oxide concentrations ranging between 0.78 ppb to 6.61 ppb were measured during April 1st, 2017 through October 31st, 2017 while NOx concentrations recorded ranged between 1.20 ppb to 9.26 ppb. On May 6th, 2017 highest daily maximum concentrations of NO and NOx were measured at CAMS 660. The diurnal analysis of NO and NOx indicated elevated concentrations during 8:00 to 10:00 AM and midafternoon – 12:00 AM – 1:00 PM followed by late evenings – 4:00 PM – 6:00 PM. The exhibited diurnal trends of precursor concentrations can be attributed to traffic sources that subsequently contributed to an increase in the ozone concentrations during mid-day and early evening hours.

Path Forward for Monitoring and Research for Year 5

Funding from the 84th Legislative session has been depleted. Temporary interim funding to continue research and monitoring activities until legislative funding can be restored has been provided by Port Industries. This temporary funding will provide for continuous monitoring of ozone and meteorological conditions at the three research grade continuous monitoring stations including Holly road CAMS 660 – Urban site, Violet CAMS 664 – downwind site, and Ingleside CAMS 685 into Year 5.

Status of AutoCheck/Clean Fleet Vehicle Emissions Testing and Repair Commitment for Year 4

The Rider funding contingent electric mower exchange and the media campaign planned for Year 4 could not be launched due to Rider funding to all near-non-attainment areas in Texas being vetoed by Governor Abbott after the closing of the 85th legislative session in June of 2017. The SEP proposal for advanced OBD diagnostics with AutoCheck events is still pending approval by TCEQ.

Ozone awareness and reduction strategies, education, and outreach was provided during Year 4 through presentations and participation in meetings for/with local governments, businesses, citizens groups, industry groups, and environmental groups to promote ozone and precursor reduction strategies. The SmartWay Partnership was included in audience appropriate presentations. (Attachment 4). Through a renewed partnership with The TxDOT, material from the 2018 Drive Clean Texas Campaign, promotional items including tire gages are being distributed to drivers. The digital media campaign anticipated in May will be launched on campus, social media, and press releases and PSAs were approved by the TAMU-CC marketing department.

P3 Clean Fleet held a total of 57 vehicle emission testing events in Year 4. The emission testing events were held throughout the community at sites such as local high schools, a university campus, the Port of Corpus Christi, a local market/trade center, shopping malls, and health fairs. (Attachment 2)

A total of 229 privately owned vehicles and 138 fleet vehicles were tested for emissions for a total of 367 vehicles tested for emissions in Year 4. Of the 367 vehicles tested, 330 tested as clean and 37 tested as dirty. There were 15 vehicles repaired to clean standards and nine gas caps detected as leaking and replaced. Total approximated emissions reductions as a result of the P3 Clean Fleet Year 4 activities is 2,774.03 pounds per year of hydrocarbons, and 16,204 pounds per year of carbon dioxide. Spreadsheets including pre and post repair emissions tests and reduction calculations are attached to this report (Attachment 3).

In addition to holding emission testing events, P3 made numerous emission reduction presentations throughout Year 4 reaching over 3,000 people. Presentations were made at local churches, student engineering classes, groups of employees, health associations and more. A summary of these events is attached to this report.

Path Forward for Year 5 for Clean Fleet

A co-branded partnership with the Port of Corpus Christi will provide funding for Clean Fleet and public outreach efforts through December 2018.

P3 will continue to host CleanFleet and AutoCheck events at least once per month testing for emission problems. Repair subsidies will continue as long as funding is available.

P3 will continue to promote SmartWay Partnerships between the freight industry and EPA.

Status of use of IR Camera Commitment for Year 4

Several industry stakeholders continued to use IR cameras to detect fugitive emissions during Year 4.

Path Forward for Use of IR Cameras for Year 5

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Status of CCAD Notification on Ozone Action Days Commitment for Year 4

Corpus Christi experienced one ozone action day (September 12, 2017). CCAD provided notifications and recommendations for the day. In addition to providing an ozone action day notification during Year 4. CCAD implemented energy saving actions such as converting their entire production facility to LED lighting. CCAD also replaced large air chillers with higher energy efficient units that contain non ODS. In teaming with select DoD, NASA, and Army commands, CCAD is currently supporting research for less volatile cold solvents. Most of the cold solvent currently utilized at CCAD is Mil Prf 680 Type II which has a low vapor pressure, and a vapor density which is approximately six times denser than air. When the new Aircraft Corrosion Control (painting) Facility is operational in early 2019, CCAD will be utilizing the best available control technology (BACT) with active carbon filtration. This action is expected to reduce the depot's VOC emissions. CCAD is also a participant in an Army research project that is researching environmentally friendly alternatives to the toxic metals used in chrome plating processes.

Path Forward for Ozone Notification for CCAD for Year 5

CCAD plans to continue to inform employees of ozone action days and emissions reduction recommendations for Year 5.

Status of Production of LRVP Commitment for Year 4

Several industry stakeholders continued the production of LRVP gasoline during Year 4.

Path Forward for Production of LRVP Gasoline for Year 5

Area gasoline producers will continue to produce LRVP gasoline during qualifying months in Year 5.

Status of Operation of Public Use CNG Fueling Facilities Commitment for Year 4

The City currently has one (1) CNG Station that is available for City and Public use and one (1) Station that serves as a backup. The CNG Station located at City Hall has been removed from service and is currently being dismantled. The CNG Station located at the Gas Department is no longer operational and plans are to remove the equipment. The CNG Station at Civitan Dr. is currently used as a backup fueling station. The fourth CNG station located at Ayers St is used by the City and is available for public use.

Path Forward for Public Use CNG Fueling Facilities for Year 5

The City is still considering building the additional CNG Stations. The City will partner with the Greater Houston Natural Gas Vehicle Alliance in promoting to the public and private fleets the use and benefits of natural gas vehicles. The City will sponsor CNG workshops with the Greater Houston NGV Alliance.

Status of RTA Commitment to Purchase CNG Vehicles for Year 4

RTA purchased 13 CNG fueled buses, 7 CNG fueled vans and 11 electric powered sedans in Year 4. Posted below is a detailed chart of the vehicles purchased.

CNG Buses & Electric Support Vehicles Purchased between May 1, 2017 - Present

VEHICLE	Dept. the Vehicle is assigned to	YEAR	MAKE/MODEL	SIZE	Seating Maximum	Fleet Type	Lift Equipped	3 Position Wheel chair	Fuel Type	Eligible for Disposition	Purchase Date	Delivery Mileage	In Service Date
916	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,077	08/27/17
917	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,042	08/27/17
918	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,018	08/27/17
919	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,206	10/04/17
920	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,204	11/16/17
921	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17		
922	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,020	
923	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,050	
924	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,157	
925	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,026	
926	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17		
3013	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3014	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3015	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3016	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3017	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3018	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3019	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18

INVENTORY OF ELECTRIC SERVICE VEHICLES

3157	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/8/2017		10/16/17
3158	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/8/2017		10/25/17
3159	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/8/2017		10/16/17
3160	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/29/2017		10/16/17
3161	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/29/2017		10/16/17
3162	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/30/2017		10/25/17
3163	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/1/2017		10/25/17
3164	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/2/2017		10/25/17
3165	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/7/2017		11/27/17
3166	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/7/2017		11/27/17
3167	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/31/2017		11/13/17
3168	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	8/1/2017		11/13/17
3169	MV - Rita Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2020	6/22/2017		11/28/17

Status of Bicycle Transportation Planning Commitment for Year 4

Construction of Bond 2012 and 2014 roadway projects, including around approximately 7 miles of protected 1-way cycle track, continues.

City of Corpus Christi completed the collaborative Branding and Design Study to define wayfinding and signage standards for the Bicycle Mobility Network

City of Corpus Christi initiated project to designate approximately 30 miles of Bicycle Boulevards using Transportation Alternatives Program funds from the MPO.

City of Corpus Christi initiated installation of a HAWK pedestrian crossing at Cole Part, a key Bayfront destination using Transportation Alternatives Program funds from the MPO.

City of Portland initiated installation of approximately three miles of Buffered Bicycle Lanes using Transportation Alternatives Program funds from the MPO.

City of Portland began construction of Phase I of the Memorial Parkway off-road multi-use path using Transportation Alternatives Program funds

RTA installed bicycle trip support hardware purchased in Year 3 using Transportation Alternatives Program funds from the MPO.

In addition to the above committed activities, the MPO also performed the following activities during Year 4:

- Presented regional Bicycle Mobility Plan as a national case study through various organizations, including the American Planning Association, Transportation for America, and the Federal Highways Administration.
- Collected (in collaboration with regional partners) and maintained data on the performance metrics defined in the Bicycle Mobility Plan, including pre- and post-construction bicycle counts on corridors on which new bike infrastructure is to be installed to establish baseline bicycle demand and assess changes over time.
- Maintained a dedicated Web portal (www.CoastalBendInMotion.org) to disseminate the plan and performance measurement data collected to track implementation.
- Maintained three primary tools for virtual data collection, all of which are functional and are yielding high volumes of quality data about stakeholder priorities.
- On-line mapping tool to capture where users ride or where they would like to ride if the conditions for cycling improved.
- Downloadable Smartphone application that allows users to log real-time data about their rides.
- On-line survey about riding habits, needs and perceived obstacles to cycling as transportation.
- Maintained a geo-spatial (Geographic Information Systems) database with individual data layers for variables that will inform bike facility network development (e.g., origin/destination data at the Traffic Analysis Zone (TAZ) level, location of key people generators, including employment centers, shopping hubs, health care facilities, groceries and markets, transit stops, academic institutions, etc.)
- Held a Call for Projects for the Transportation Alternatives Set-Aside Program and ultimately awarded an \$1.1M to the City of Corpus Christi for the Hector P. Garcia Park Hike and Bike Trail: Phase II (FY2019) and the Schanen Ditch Hike and Bike Trail: Phase IV (FY2020)
- Participated in TX Innovation Alliance, a statewide consortium working to develop technological strategies to address mobility challenges.

Path Forward for Bicycle and Mobility Planning for Year 5

Foster the incorporation of Intelligent Transportation System technology in roadway infrastructure projects to promote efficiency in the regional transportation system and mitigate congestion and associated air quality impacts.

Assist the municipalities within the MPO with the build out of the regional Bicycle Mobility Plan as part of locally funded roadway work.

Assist City of Corpus Christi in implementation of Bike Boulevard designation using MPO Transportation Alternatives funds

Assist City of Corpus Christi in initiation of Hector P. Garcia Park Hike and Bike Trail: Phase II using MPO Transportation Alternatives funds

Collect (in collaboration with regional partners) performance metrics data defined in the Bicycle Mobility Plan, including pre- and post-construction bicycle counts on corridors on which new bike infrastructure is to be installed to establish baseline bicycle demand and assess changes over time.

Maintain a dedicated Web portal (www.CoastalBendInMotion.org) to disseminate the plan and performance measurement data collected to track implementation.

Status of Education Efforts Commitment for Year 4

In July and October 2017 communications were sent to the Group that included instructions on how to register for elevated ozone alerts and forecasts via AirNow. Included in the communications were numerous prepared scripts for emission reduction recommendations that could be easily forwarded, or mass emailed. Newly sited or planned to site industry representatives were added to the Corpus Christi communication list and included in all Group communications. Several media updates and briefings were provided during Year 4. The results of the updates and briefings included daily AQI information reported in the local newspaper, television, and newspaper recommendations on an ozone action day in September 2017, and several newspaper articles and editorials highlighting the air quality benefit of participating in emission reduction activities.

Path Forward for Education Efforts for Year 5

No-cost air quality education via media briefings, promotion of air quality messages through social media, promotion of EPA flags, brochures and other educational material will continue through Year 5. The Group Facebook site and web site will continue to be maintained and updated. The Chair will continue to distribute the emissions reductions recommendations and checklist to all stakeholders.

Status of Announcing Emission Reduction Funding Opportunities Commitment for Year 4

Funding announcements were sent to qualifying stakeholders during Year 4. Announcements included training and funding opportunities for Ozone Advance communities, and EPA and TCEQ grant calls. Announcements were sent in September and November of 2017 and February of 2018.

Path Forward for Announcing Funding Opportunities for Year 5

The Chair will continue to inform stakeholders and appropriate audiences of funding opportunities for emission reduction planning and programs during Year 5.

Status of Van Share Promotion Commitment for Year 4

The chart posted below reflects the Van Share program accomplishments for Year 4.

2017 Van Pool Information

	Average Weekday Service	Average Saturday Service	Average Sunday Service	Annual Total
Vehicles In Operation	5	5	5	
Total Vehicle Miles	244	250	262	75,406
Total Vehicle Hours	11	12	13	3,457
Total Monthly Ridership Unlinked Passenger Trips				9,802
Days Operated	228	40	39	307

During Year 4, the RTA also provided shuttle services to 32,389 riders over a total of 7,060 miles to numerous community events: removing vehicles from the road. A break-out of shuttle services provided is provided below:

MARTIN LUTHER KING MARCH/PARADE						
	Date	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
MLK Parade	01/15/18	145	64.00	5.85	2	
MLK Parade	01/16/17	274	66.0	8.14	2	
	Totals	419	130	13.99	4	
Fiesta de la Flor						
	DATE	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
	GRAND TOTAL	11,889	1,153.0	171.40	21	
3/24/17	RTA	3,504	414.0	51.16	8	
3/25/17	RTA	8,139	547.0	84.79	11	
	RTA TOTALS	11,643	961.0	135.95	19	
3/24/17	MV	37	51.0	6.73	1	
3/25/17	MV	209	141.0	28.72	1	
	MV TOTALS	246	192.0	35.45	2	
2017 Air Show						
	Date	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
04/05/17	RTA	398	484.0	32.11	4	
04/06/17	RTA	258	420.0	21.45	4	
		656	904	54	8	
BEACH2BAY						
	Event	Year	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses
	05/20/17	RTA	10,860	2,958.0	183.08	22
Mayor's 4th of July Big Bang Celebration						
		TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
RTA-Big Bang Celebration	7/4/2017	1,487	214.0	51.67	?	
RTA-July 4 Dignitaries	7/4/2017	66	48.0	15.50		
RTA-Parade July 4th	7/4/2017	37	19.0	3.83		
		1,590	281.0	71.00		
Buc Days Event						
	DATES	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
RTA-Buc Parade Drop Off	5/6/17	37	26.0	5.17		
RTA-Buccaneer Parade	5/6/17	2	14.0	9.00		
RTA-Buc Commission	4/17/2017	25	40.0	3.75		
		64	80.0	17.92		
Leadership Corpus Christi						
	Date	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
Leadership Corpus Christi	9-Jan	35	34	4.16	2	
	12-Jan	61		3.67		
	Totals	96	34	7.83	2	
Dia De Los Muertos						
	Date	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
RTA-Dia De Los Muertos	10/28/2017	2,483	231.0	49.37		
MV-Dia De Los Muertos	10/28/2017	117	56.0	10.90		
		2,600	287	60.27		
2017 JAZZ FESTIVAL						
	Date	TOTAL RIDERS	TOTAL MILES	TOTAL HOURS	No. of Buses	
Jazz Fest	10/20/17	692	278.0	45.28	5	
Jazz Fest	10/21/17	2,495	588.0	108.45		
Jazz Fest	10/22/17	654	204.0	39.78	4	
Jazz Fest	10/20/17	168	56.0	8.33		
Jazz Fest	10/21/17	447	78.0	12.98	1	
Jazz Fest	10/22/17	5	29.0	4.40	1	
		4,461	1,233.0	219.22	11.00	

Bike Share Program

In August 2016, the City of Corpus Christi, The Regional Transit Authority, and the Downtown Management District partnered to develop and launch the Bike Corpus Christi Bike Share program. Seven bicycle stations providing a total of 44 bicycles were placed in strategic locations in uptown and downtown Corpus Christi. Printed materials including maps of bike station locations were widely distributed. During Year 4, there were 13,465 trips taken on the bicycles by 8,241 active members for a total of 71,768 miles.

Electric Vehicle Infrastructure

Public charging facilities for electric vehicles grew to a total of 14 during Year 4. Sites include La Palmera, a major shopping mall, a BMW dealership, 2 Nissan dealerships, and in Corpus Christi, has free electric vehicle parking and charging stalls. Charging stations are also available at the local Nissan dealership, the local BMW dealership, and 5 area hotels.

Briefings

The Chair provided over a dozen briefings to community groups and leaders about current air quality issues and challenges during Year 4. Groups and leaders that received briefings included the MPO Planning Committee, Nueces County Commissioners, San Patricio County Commissioners, Port of Corpus Christi Commissioners, Port Industry managers, local business owners, and Corpus Christi Chamber of Commerce. Information presented included the importance of remaining in attainment of ozone standards, the critical need for emission reduction programs and program funding challenges.

This appendix reflects the major highlights of the Year 4 Ozone Advance Report submitted to EPA. To view the complete Year 4 Annual Report including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX F

ANNUAL REPORT FOR YEAR 5 ACTIVITIES May 2018 – APRIL 2019

APPENDIX F

ANNUAL REPORT FOR YEAR 5 (May 2018 – April 2019)

Status of Establishing Air Quality Position and Program Commitment for Year 5

The Group Facebook (facebook.com/ccairquality) reached approximately 160 people during Year 5. The Group website (www.cctexas.com/planning-esi/environmental-strategic-initiatives-esi/cc-air-quality-group) experienced 605 hits. The Pollution Prevention Partnership Air Quality Website (outreach.tamucc.edu/p3/) enjoyed 293 hits during Year 5.

Path Forward for Air Quality Education Efforts for Year 6

The Group will continue to host a Facebook site, a Website, and provide air quality public presentations to community groups, agencies, elected officials, and business leaders. Presentations will also include promoting the use of EPA flags, brochures and other no cost distribution materials.

Status of Air Quality Curricula for Year 5

Air quality curricula was delivered to a total of 555 5th grade students in 25 classes at 4 schools in Year 5. Pre and post testing of air quality knowledge was performed on the students prior to and after receiving the curricula. Testing results averaged 5 correct answers out a possible 10 prior to receiving the curricula and 8 correct answers after receiving the curricula.

Path Forward for Air Quality Curricula for Year 6

Industry will meet to consider funding air quality curricula for Year 6.

Status of Research, Modeling and Monitoring Commitment for Year 5

Funding from the 84th Legislative session has been depleted. Temporary interim funding to continue research and monitoring activities until legislative funding can be restored has been provided by Port Industries. This temporary funding will provide for continuous monitoring of ozone and meteorological conditions at the three research grade continuous monitoring stations including Holly road CAMS 660 – Urban site, Violet CAMS 664 – downwind site, and Ingleside CAMS 685 into Year 5.

Monitoring Accomplishments

With the funding support provided by Port Industries, continuous monitoring of ozone and meteorological parameters was conducted at CAMS 660, CAMS 664, and CAMS 685 during 2018. Each of the sites were equipped with an ozone analyzer; weather sensors including RM Young wind sensor and coastal environmental temperature and humidity sensor; Zeno data logger and Enfora wireless modems. Continuous measurements of ozone, wind speed, wind direction, outdoor temperature, and relative humidity were recorded at each of the stations and using the TCEQ LEADS acquisition system data was made publicly available on TCEQ's website. Additional monitoring of nitrogen oxides was also conducted at CAMS 660 – Holly Road during April 1st, 2018 through October 31st,

2018. An overall decrease in the ozone design value trend was observed during 2007 through 2018 at both compliance grade and research grade monitoring stations. *Figure 4*

Research Accomplishments

The design value trend analysis performed using the ozone concentrations measured at compliance grade monitoring stations (CAMS 04 and CAMS 21) and research grade monitoring station (CAMS 660, CAMS 664, and CAMS 685) is shown below.

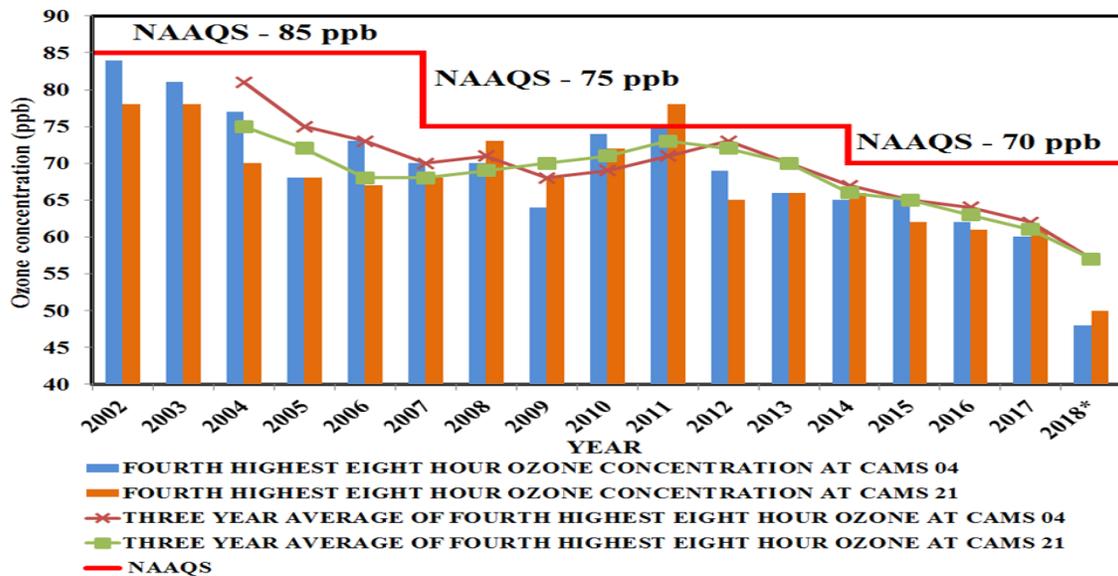


Figure 3. (repeated) Corpus Christi Ozone Design Trends at TCEQ Regulatory Monitors CAMS 4 and CAMS 21

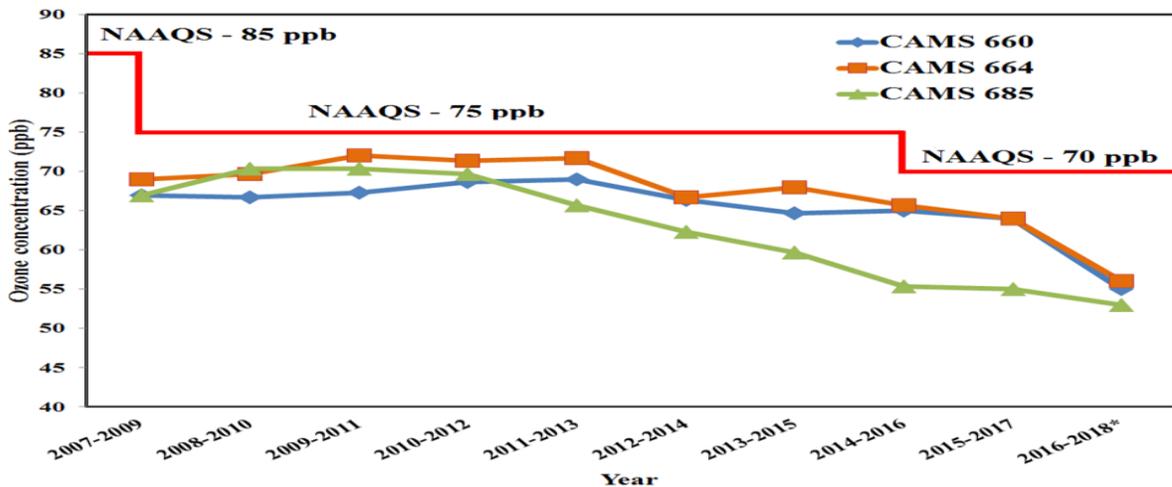


Figure 4. Corpus Christi Ozone Design Trends at TAMUK/UNT Research Monitors CAMS 660, 664, 685
 *Deactivated

As demonstrated by the design value trends, a decreasing trend in ozone concentration has been noted at both TCEQ maintained compliance grade monitoring stations as well as research grade monitoring stations maintained and operated by UNT-TAMUK. At both CAMS 04 and CAMS 21 zero days with daily maximum eight-hour ozone concentration above 70 ppb were recorded. The downwind site in Violet – CAMS 664 and upwind site Ingleside – CAMS 685 also recorded zero days exceeding 70 ppb while urban site – Holly Road (CAMS 660) recorded two days. The two days included August 1st (74 ppb) and August 2nd (71 ppb). The highest daily maximum eight-hour ozone concentrations of 66 ppb were recorded on April 25th at CAMS 21 and August 2nd at CAMS 04. The downwind site – Violet (CAMS 664) recorded 65 ppb on August 1st and 68 ppb on August 2nd. The urban site – CAMS 660 recorded one day which was August 3rd (66 ppb) with daily maximum eight-hour ozone concentration ranging between 65 ppb and 70 ppb. Contrary to urban and downwind site, upwind site Ingleside recorded two days with daily maximum eight-hour ozone concentrations ranging between 65 ppb and 70 ppb during late April. The two days included April 27th and 28th with highest of 69 and 68 ppb, respectively. The dominant winds during 2018 were noted to be southeasterly with speeds varying from 2.0 – 4.0 m/s.

Additional monitoring of oxides of nitrogen was conducted at Holly Road – CAMS 660 during ozone season of 2018. The daily maximum one-hour concentrations of Nitric oxide concentrations ranged between 0.7 ppb to 4.4 ppb with an average of 1.6 ppb while NOx concentration ranged between 1.3 ppb to 8.3 ppb with an average of 3.8 ppb. The diurnal analysis of NO and NOx indicated elevated concentrations during 8:00 to 10:00 AM and midafternoon – 12:00 AM – 1:00 PM followed by late evenings – 4:00 PM – 6:00 PM. The exhibited diurnal trends of precursor concentrations can be attributed to traffic sources that subsequently contributed to an increase in the ozone concentrations during mid-day and early evening hours.

Path Forward for Monitoring and Research for Year 6

Funding is depleted for monitoring and research and these activities have been ceased. Path forward for Year 6 is to work with the Texas legislature and local stakeholders to reinstate funding to resume monitoring and research activities.

Status of AutoCheck/Clean Fleet Vehicle Emissions Testing and Repair Commitment for Year 5

Through funding assistance provided by the Port of Corpus Christi, the Pollution Prevention Partnership (P3) Clean Fleet program implemented a multipoint strategy to reduce ozone: Voluntary emissions testing of private and business vehicles, ozone action training and awareness, distributions of tire gauges and literature from local, state, and federal air quality programs, and participation in policy planning meetings and forums. P3 also continuously researched potential future programs and air quality strategies such as an electric lawn equipment exchange and green scaping.

P3 held 55 vehicle emissions testing events where 292 private vehicles and 122 fleet vehicles were tested for emissions. 10 repairs and gas cap replacements were funded resulting in an estimated 1,250 lbs. of hydrocarbon and 8,422 lbs. of carbon monoxide

emissions reduced annually. 13 vehicles were referred to fleet managers for inspection and maintenance. A spreadsheet detailing emission test events is attached to this report (Attachment 2). A spreadsheet detailing pre and post emissions reductions calculations is attached to this report (Attachment 3).

P3 provided ozone-reduction strategy, education, tools, and advocacy at 21 educational and policy meetings, interacting with over 3,000 individuals. P3 exhibited and presented at fairs, conferences, and workshops with themes of STEM, health, safety, environment, education, and community planning. A summary of these events is attached to this report (Attachment 4).

P3 is an EPA SmartWay affiliate and a Texas Department of Transportation Drive Clean Across Texas affiliate. Promotional and educational material from these programs are distributed to drivers directly, through our web site (<http://outreach.tamucc.edu/p3/index.html>) and periodically distributed through Community Outreach Facebook account (<https://www.facebook.com/Community-Outreach-at-Texas-AM-University-Corpus-Christi-110752215660568/>)

Service contracts with the Port of Corpus Christi were executed which provide funding for many of the emission reduction activities. P3 is also working with TCEQ to amend and expand emissions testing protocol to include OBD-II malfunction indicator lights. This change would allow more emissions reducing repairs to be completed on vehicles that have a longer remaining lifespan, therefore increasing cumulative annual emissions reductions.

Path Forward for Clean Fleet for Year 6

P3 will continue to participate in the Corpus Christi Air Quality Group, and other policy related forums, and meetings. Ozone reduction strategies and training will continue at conferences, health fairs and workshops. The emissions testing programs will be promoted at these venues and implemented on site when possible, funding contingent. Clean Fleet and P3 will continue our current affiliations and partnerships with EPA SmartWay, Texas Department of Transportation Drive Clean Across Texas and The Port of Corpus Christi. P3 will promote these on the web and social media. P3 will continue providing free voluntary emissions testing for private and public fleets, funding contingent, and will continue funding repairs for private vehicle with pollution related mechanical issues as long as funding is available. P3 anticipates that the expanded OBD-II repair criteria will be implemented.

P3 will continue to look for funding sources that will allow them to expand existing services or begin new programs such as an electric lawn equipment subsidy for gasoline engine exchange.

Status of use of IR Camera Commitment for Year 5

Several industry stakeholders continued to use IR cameras to detect fugitive emissions during Year 5.

Path Forward for Use of IR Cameras for Year 6

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Status of CCAD Notification on Ozone Action Days Commitment for Year 5

Corpus Christi did not have an ozone action day during this reporting period. CCAD did have the notification system set up and prepared during the reporting period. CCAD partners with select DoD, NASA, and Army commands, and is currently supporting utilization of volatile cold solvents and lower VOC paints. Posted below is a chart reflecting the emissions reductions since 2014 as a result of these lower VOC initiatives.

	2018 Percent Changes in Emissions from 5 Years Ago (2014)
PM-10	-0.54
Nonmethane Organic Compounds	-0.26
Sulfur Dioxide	-0.41
Nitrogen Oxide	-0.35
Carbon Monoxide	-0.47
Total	-0.33

Path Forward for Ozone Notification for CCAD for Year 6

CCAD plans to continue to inform employees of ozone action days and emissions reduction recommendations and employ pollution prevention initiatives for Year 6.

Status of Production of LRVP Commitment for Year 5

Several industry stakeholders continued the production of LRVP gasoline during Year 5.

Path Forward for Production of LRVP Gasoline for Year 6

Area gasoline producers will continue to produce LRVP gasoline during qualifying months in Year 6.

Status of Operation of Public Use CNG Fueling Facilities Commitment for Year 5

The City currently has one (1) CNG Station located on Ayers St. that is available for City and Public use and one (1) Station located on Civitan Dr. that serves as a backup. The City purchased seven (6) CNG bi-fuel and dedicated vehicles in 2018.

Path Forward for Public Use CNG Fueling Facilities for Year 6

The City will partner with the Texas Natural Gas Vehicle (NGV) Alliance in promoting to the public and private fleets the use and benefits of natural gas vehicles. The City will sponsor CNG workshops with the Greater Houston NGV Alliance.

Status of RTA Commitment to Purchase CNG Vehicles for Year 5

RTA did not purchase any new CNG or Electric vehicles during Year 5. The chart below updates 6 vehicles that were purchased in late 2017/early 2018 but were not put into service until 2018.

VEHICLE	Dept Assigned to	YEAR	MAKE/MODEL	SIZE	Seating Max	Fleet Type	Lift Equipped	3 Position Wheel Chair	Fuel Type	Eligible for Disposition	Purchase Date	Delivery Mileage	In Service Date
921	Vehicle Maintenance	2017	GILLIG/ Low Floor	35'	32	Fixed	Ramp	Yes	CNG	2029	5/1/2017	2,265	3/7/2018
922	Vehicle Maintenance	2017	GILLIG/ Low Floor	35'	32	Fixed	Ramp	Yes	CNG	2029	5/1/2017	2,020	4/5/2018
923	Vehicle Maintenance	2017	GILLIG/ Low Floor	35'	32	Fixed	Ramp	Yes	CNG	2029	5/1/2017	2,050	3/27/2018
924	Vehicle Maintenance	2017	GILLIG/ Low Floor	35'	32	Fixed	Ramp	Yes	CNG	2029	5/1/2017	2,157	7/10/2018
925	Vehicle Maintenance	2017	GILLIG/ Low Floor	35'	32	Fixed	Ramp	Yes	CNG	2029	5/1/2017	2,026	4/30/2018
926	Vehicle Maintenance	2017	GILLIG/ Low Floor	35'	32	Fixed	Ramp	Yes	CNG	2029	5/1/2017	2,037	8/27/2018

CNG Buses & Electric Support Vehicles Purchased between May 1, 2017 - Present

VEHICLE	Dept. the Vehicle is assigned to	YEAR	MAKE/MODEL	SIZE	Seating Maximum	Fleet Type	Lift Equipped	3 Position Wheel chair	Fuel Type	Eligible for Disposition	Purchase Date	Delivery Mileage	In Service Date
918	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,077	08/27/17
917	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,042	08/27/17
918	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,018	08/27/17
919	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,206	10/04/17
920	Vehicle Maintenance	2017	GILLIG/ Low Floor	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,204	11/16/17
921	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17		
922	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,020	
923	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,050	
924	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,157	
925	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17	2,026	
926	Vehicle Maintenance	2017	GILLIG/ Low Floor - Not in Service	35	32	Fixed	Ramp	Yes	CNG	2029	05/01/17		
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3014	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3015	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3016	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3017	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3018	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18
3019	MV Transit	2017	ARBOC/SOM-Spirit of Mobility	26	13+2 WC	Paratransit	Ramp	Yes	CNG	2022	1/1/2018		01/15/18

INVENTORY OF ELECTRIC SERVICE VEHICLES

3157	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/8/2017		10/16/17
3158	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/8/2017		10/25/17
3159	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/8/2017		10/16/17
3160	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/29/2017		10/16/17
3161	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/29/2017		10/16/17
3162	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	6/30/2017		10/25/17
3163	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/1/2017		10/25/17
3164	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/2/2017		10/25/17
3165	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/7/2017		11/27/17
3166	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/7/2017		11/27/17
3167	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	7/31/2017		11/13/17
3168	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2021	8/1/2017		11/13/17
3169	MV - Rta Relief Vehicles	2016	Ford Focus Electric	5-DR	5	Sedan	No	No	Electric	2020	6/22/2017		11/28/17

Status of Bicycle Transportation Planning Commitment for Year 5

MPO Assistance with Bicycle Mobility Planning Accomplishments

Continued construction of Bond 2012 and 2014 roadway projects resulting in the implementation of 1-way cycle tracks, and multi-use side paths.

RTA installed bicycle trip support hardware purchased in Year 3 using Transportation Alternatives Program funds from the MPO.

Collected (in collaboration with regional partners) and maintained data on the performance metrics defined in the Bicycle Mobility Plan, including pre- and post-construction bicycle counts on corridors on which new bike infrastructure is to be installed to establish baseline bicycle demand and assess changes over time.

Maintained a dedicated Web portal (www.CoastalBendInMotion.org) to disseminate the plan and performance measurement data collected to track implementation.

Maintained three primary tools for virtual data collection, all of which are functional and are yielding high volumes of quality data about stakeholder priorities:

- On-line mapping tool to capture where users ride or where they would like to ride if the conditions for cycling improved
- Promoted Strava smartphone application that allows users to log real-time data about their rides
- On-line survey about riding habits, needs and perceived obstacles to cycling as transportation
- Individual data layers for variables that will inform bike facility network development (e.g., origin/destination data at the Traffic Analysis Zone (TAZ) level, location of key people generators, including employment centers, shopping hubs, health care facilities, groceries and markets, transit stops, academic institutions, etc.)

Path Forward for Bicycle Mobility Planning for Year 6

Foster the incorporation of Intelligent Transportation System technology in roadway infrastructure projects to promote efficiency in the regional transportation system and mitigate congestion and associated air quality impacts.

Assist the municipalities within the MPO with the build out of the regional Bicycle Mobility Plan as part of locally funded roadway work.

Assist City of Corpus Christi in implementation of Bike Boulevard designation using MPO Transportation Alternatives funds.

Assist City of Corpus Christi in continued development of Hector P. Garcia Park Hike and Bike Trail: Phase II using MPO Transportation Alternatives funds.

Collect (in collaboration with regional partners) performance metrics data defined in the Bicycle Mobility Plan, including pre- and post-construction bicycle counts on corridors on which new bike infrastructure is to be installed to establish baseline bicycle demand and assess changes over time.

Maintain dedicated Web portal (www.CoastalBendInMotion.org) to disseminate the plan and performance measurement data collected to track implementation.

Status of Van Share Promotion Commitment for Year 5

The chart posted below reflects the Van Share program accomplishments for Year 5.

2018 Vanpool				
Field	Average Weekday Schedule	Average Saturday Schedule	Average Sunday Schedule	Annual Total
Vehicles in Operation	10	3	1	N/A
TOTAL ACTUAL VEHICLE MILES	364	34	51	82,942
TOTAL ACTUAL VEHICLE HOURS	8	1	1	1,935
SERVICES CONSUMED				
Total Monthly Ridership Unlinked Passenger Trips (UPT):	16,002			
SERVICES OPERATED (DAYS)				
Field	Total Weekday Schedule	Total Saturday Schedule	Total Sunday Schedule	Annual Total
Days Operated	224	22	12	258

During Year 5, the RTA also provided shuttle services to 42,495 riders over a total of 6,537.02 miles to numerous community events: removing vehicles from the road.

2018 YEARLY MOVEMENTS						
Event	Year	Total Passengers	Total Miles	Total Hours	Date	
MLK DAY	2018	145	64	5.85	1/15/2018	
Fiesta De La Flor	2018	12,686	912	149.57	4/13/18 & 4/14/18	
Port Aransas Sand Festival	2018	1630	707.02	73.5	4/27/18 to 4/29/18	
Buc Days: Carnival, Night Parade	2018	198	683	73	5/3/18 to 5/12/18	Includes both MV & RTA

Event	Year	Total Passengers	Total Miles	Total Hours	Date	
Beach2Bay	2018	14,584	2,655	169.23	05/19/18	
July 4-Big Bank Celebration	2018	1514	268	54.71	7/4/2018	
JAZZ Festival	2018	2385	798	146.54	10/19/18 to 10/21/18	Includes both MV & RTA
American Cancer Walk	2018	1,110	146	24.73	10/20/2018	
MV-Dia De Los Muertos	2018	8,243	304	63	10/27/18	Includes both MV & RTA

Bike Share Program

In August 2016, the City of Corpus Christi, The Regional Transit Authority, and the Downtown Management District partnered to develop and launch the Bike Corpus Christi Bike Share program. Seven bicycle stations providing a total of 44 bicycles were placed in strategic locations in uptown and downtown Corpus Christi. Printed materials including maps of bike station locations were widely distributed. During Year 5, there were 11,483 trips taken on the bicycles by 4,357 active members for a total of 41,977 miles.

Electric Vehicle Infrastructure

Public charging facilities for electric vehicles grew to a total of 18 during Year 5. Sites include La Palmera, a major shopping mall, a BMW dealership, 2 Nissan dealerships, 2 Ford dealerships, Cinnamon Shores condominiums, and Fairfield Inn.

This appendix reflects the major highlights of the Year 5 Ozone Advance Report submitted to EPA. To view the complete Year 5 Annual Report including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX G

ANNUAL REPORT FOR THE COMPLETION OF YEAR 5 ACTIVITIES JUNE 2019 – DECEMBER 2019

APPENDIX G

ANNUAL REPORT FOR COMPLETION OF YEAR 5 (May 2018 – April 2019)

Air Quality Education Programs

Path Forward Air Quality Education

The Partnership will continue to host a Facebook site, a Website, and provide air quality public presentations and briefings to community groups, agencies, elected officials, and business leaders. Presentations will also include promoting the use of EPA flags, brochures and other no cost distribution materials. No-cost air quality education via media briefings, promotion of air quality messages through social media, brochures and other educational material will continue. The Chair will continue to distribute the emissions reductions recommendations and checklist to all stakeholders. Industry will meet to consider funding air quality curricula.

Air Quality Education Accomplishments (May 2019 – December 2019)

The Partnership Facebook page (facebook.com/ccairquality) reached approximately 98 people during May 2019 – December 2019. During the same time period, the Partnership website (www.cctexas.com/planning-esi/environmental-strategic-initiatives-esi/cc-air-quality-group) experienced 267 hits and the Pollution Prevention Partnership Air Quality Website (outreach.tamucc.edu/p3/) enjoyed 3,114 hits.

In May of 2019, communications were sent to stakeholders that included instructions on how to register for elevated ozone alerts and forecasts via AirNow. Work with the local newspaper resulted in daily posting of AQI information. In October and November of 2019, emissions reduction checklists were provided to San Patricio and Corpus Christi Regional Economic Development Corporations. Numerous education efforts were also made by group stakeholder Pollution Prevention Partnership and are cited on page 9 and attachment 5 of this report.

Air Quality Briefing Accomplishments (May 2019 – December 2019)

Several briefings were provided to community groups and leaders about current air quality issues, the importance of attaining air quality standards, air quality challenges, and recommendations for emission reduction activities during May 2019 – December 2019. Groups and leaders that received briefings included the Nueces County Commissioners, San Patricio and Corpus Christi Regional Economic Development Corporations, United Chamber of Commerce representatives, an environmental panel, and the Corpus Christi Metropolitan Planning Organization.

Path Forward for Air Quality Education and Briefings for Year 6

The Partnership webpage and Facebook page will continue in Year 6. Briefings and presentations about the importance of air quality and emission reduction recommendations will continue throughout the community in Year 6.

The Port of Corpus Christi has sponsored and commissioned a study to be performed by Dr. Jim Lee at Texas A&M University-Corpus Christi to identify the annual cost to the Corpus Christi urban airshed should the airshed be declared nonattainment. The study is anticipated to be in presentation form by Summer of 2020 and will be utilized as an impressive tool in briefings and presentations to demonstrate the severe consequences of non-attainment and benefits of employing voluntary emission reduction activities.

The Port of Corpus Christi has also agreed to sponsor the graphics, production, and printing of a distribution piece for regional economic development corporations to provide to business and industry operating in or seeking to operate in the airshed. The distribution piece will include a letter from the Partnership, a checklist of emission reduction requirements, and letters of support from airshed elected officials and leaders. The piece is anticipated to be available by Summer 2020.

Air Quality Curricula

Path Forward Air Quality Curricula

Area industry is considering funding for the continuation of an air quality curricula to be delivered to area 5th grade classes.

Air Quality Curricula Accomplishments (May 2019 – December 2019)

Air quality curricula was delivered in the Spring of 2019. There was no delivery of air quality curricula in the May 2019 – December 2019 time period.

Path Forward for Air Quality Curricula for Year 6

Industry will meet to discuss funding air quality curricula for Year 6.

Monitoring and Research

Path Forward for Monitoring and Research

Funding is depleted for monitoring and research and these activities have ceased. The path forward is to work with the Texas legislature and local stakeholders to reinstate funding to resume monitoring and research activities.

Accomplishments for Monitoring and Research (May 2019 – December 2019)

Stakeholder efforts to reinstate legislative funding for air monitoring and research was successful and funding to the area in the amount of \$281, 250 was approved by the legislature in May 2019 for monitoring and/or emission inventory activities. During September through December 2019, telephone meetings took place between City of Corpus Christi representatives and TCEQ to prepare a work plan for the funding.

Path Forward for Monitoring and Research for Year 6

City of Corpus Christi representatives plan to have receipt of the funding approved by City Council, finalization and approval of a work plan, and selection of contractors to accomplish the work plan deliverables in Year 6.

Clean Fleet

Path Forward for Clean Fleet

A co-branded partnership with the Port of Corpus Christi will provide funding for Clean Fleet and public outreach efforts through December 2019 through the Pollution Prevention Partnership (P3). P3 will continue to host CleanFleet and AutoCheck events at least once per month testing for vehicle emission problems. Repair subsidies will continue as long as funding is available. P3 will continue to promote SmartWay Partnerships between the freight industry and EPA.

Clean Fleet Accomplishments (May 2019 – December 2019)

With supplemental funding from The Port of Corpus Christi, Texas A&M University-Corpus Christi administered the Pollution Prevention Partnership (P3), AutoCheck, and Clean Fleet program. In combination these programs implemented a multipoint strategy to reduce ozone through voluntary emissions testing of private and business vehicles, repair of private vehicles, ozone action training and awareness, distributions of tire gauges and literature from local, state, and federal air quality programs, and participation in policy planning meetings and forums.

In May 2019, the Texas Commission on Environmental Quality, approved an amendment to the AutoCheck Supplemental Environmental Program (SEP) administered by P3. This allowed the program to expand its screening protocol to include many Diagnostic Troubleshooting Codes (DTC) provided by the Advanced Onboard Diagnostic System (OBD-II). By making repairs based on these “Check Engine Light” issues, AutoCheck can make more emission reduction and prevention repairs on vehicles that have a longer remaining lifespan, therefore increasing cumulative annual emissions reductions. The repairs made by the AutoCheck SEP are performed with penalty monies from a Texas Commission on Environmental Quality enforcement action.

P3 held 31 vehicle emissions testing events where 266 vehicles were tested for emissions and OBD-II codes. 27 Gas Cap and Evaporative Control System repairs were made, and 24 non-evaporative repairs were made resulting in an estimated 3,681 lbs. of hydrocarbon emissions and 1,974 pounds of carbon monoxide directly reduced annually. Preventive repairs contributed additional, but unquantifiable reductions. Detailed information on the events and pre and post emissions is provided in *Attachments 1 and 2*.

P3 provided ozone-reduction strategy, education, tools, and advocacy at 13 educational and policy meetings, interacting with 1,633 individuals. P3 exhibited and presented at fairs, conferences, and workshops with themes of STEM, health, safety, environment, education, and community planning. A summary of these events is provided in *Attachment 3*.

P3 is an EPA SmartWay affiliate and a Texas Department of Transportation Drive Clean Across Texas affiliate. Promotional and educational material from these programs are distributed to drivers directly, through web site (<http://outreach.tamucc.edu/p3/index.html>) and periodically distributed through Community Outreach Facebook account (<https://www.facebook.com/Community-Outreach-at-Texas-AM-University-Corpus-Christi-110752215660568/>)

Path Forward for Clean Fleet for Year 6

P3 will continue to participate in the Coastal Bend Air Quality Partnership, and other policy related forums, and meetings. P3 will continue presenting Ozone reduction strategies and education at conferences, health fairs, meetings, and workshops. The emissions testing programs will be promoted at these venues and implemented on site when possible, funding contingent. P3 will add an electric lawn equipment section to the P3 web site.

Clean Fleet and P3 will continue our current affiliations and partnerships with EPA SmartWay, Texas Department of Transportation Drive Clean Across Texas, and The Port of Corpus Christi. P3 will promote these partnerships and associated collateral material in person, on the web, and social media.

P3 will continue providing free voluntary emissions testing for private and public fleets and will continue funding repairs for qualified private vehicles with pollution related mechanical issues as long as funding is available. The screening protocol will continue to use tailpipe gas analysis, gas cap pressure testing, and Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). AutoCheck will replace missing tire valve stem caps for all participants to reduce incidents of low tire pressure due to dirty air valves.

P3 will continue to look for funding sources that will allow them to expand existing services or begin new programs such as an electric lawn equipment subsidy for gasoline engine exchange.

Use of IR Cameras

Path Forward for Use of IR Camera

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Use of IR Camera Accomplishments (May 2019 – December 2019)

A table capturing the overall use of IR cameras in addition to other volunteer activities is included on page 16 of this report.

Path Forward for Use of IR Cameras for Year 6.

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Corpus Christi Army Depot (CCAD) Ozone Action Day Notifications

Path Forward for CCAD Notification

CCAD will continue to provide all employees with notifications when Ozone Action Days are declared and offer voluntary actions to take during and after work periods.

CCAD Notifications and Accomplishments (May 2019 – December 2019)

Corpus Christi did not have an ozone action day during this reporting period. CCAD did have the notification system set up and prepared during the reporting period.

Path Forward for Ozone Notification for CCAD for Year 6

CCAD plans to continue to inform employees of ozone action days and emissions reduction recommendations and employ pollution prevention initiatives for Year 6.

Production of Low Reid Vapor Pressure (LRVP) Gasoline

Path Forward for Production of LRVP

Industry plans to consider the continuation of producing LRVP.

Production of LRVP Gasoline Accomplishments (May 2019 – October 2019)

The production of LRVP gasoline was continued. A table summarizing local participation in the production of LRVP gasoline in addition to other voluntary emission reduction activities can be found on page 16 of this report.

Path Forward for Production of LRVP Gasoline for Year 6

Area gasoline producers will continue to consider the production of LRVP gasoline during qualifying months in Year 6.

Operation of Public Use Compressed Natural Gas (CNG) Fueling Facilities

Path Forward for Public Use CNG Fueling Facilities

The City is still considering building the additional CNG Stations. The City will partner with the Greater Houston Natural Gas Vehicle Alliance in promoting to the public and private fleets the use and benefits of natural gas vehicles. The City will sponsor CNG workshops with the Greater Houston NGV Alliance.

Public Use CNG Fueling Facilities Accomplishments (May 2019 – December 2019)

The City currently has one (1) CNG Station located on Ayers St. that is available for City and Public use and one (1) Station located on Civitan Dr. that serves as a backup.

Path Forward for Public Use CNG Fueling Facilities for Year 6

The City will partner with the Texas Natural Gas Vehicle (NGV) Alliance in promoting to the public and private fleets the use and benefits of natural gas vehicles. The City will sponsor CNG workshops with the Greater Houston NGV Alliance.

Electric Vehicle Infrastructure

There are 13 public charging facilities for electric vehicles in the airshed. Sites include La Palmera; a major shopping mall, a BMW dealership, 2 Nissan dealerships, and area hotels.

City of Corpus Christi Purchase of CNG Vehicles

City of Corpus Christi Purchase of CNG Vehicles Accomplishments (May 2019 – December 2019)

The City of Corpus Christi purchased six (*) CNG bi-fuel and dedicated vehicles.

Path Forward for City of Corpus Christi Purchase of CNG Vehicles for Year 6

The City of Corpus Christi plans to purchase twenty-two (22) CNG bi-fuel and dedicated vehicles in 2020 to replace aging fleet.

RTA Purchase of CNG Vehicles

RTA Purchase of CNG Vehicles Accomplishments (May 2019 – December 2019)

RTA did not purchase any new CNG or Electric vehicle from May 1, 2019 to the December 31, 2019. The details below update 1 vehicle that were purchased in Mid-2019 but was not put into service until late 2019.

VEHICLE	Dept. Assigned to	YEAR	MAKE/MODEL	SIZE	Seating Max	Fleet Type	Lift Equipped	3 Position Wheel Chair	Fuel Type	Eligible for Disposition	Purchase Date	Delivery Mileage	In Service Date
	CCRTA Support	2019	Ford Fusion	5-DR	5	Support	N/A	No	Unleaded	2028	5/31/2019	0	9/17/2019

MPO Assistance with Mobility Planning

MPO Assistance with Mobility Planning Accomplishments (May 2019 – December 2019)

The MPO continued construction of Bond 2014 roadway projects resulting in the implementation of 1-way cycle tracks. Funding provided by MPO Transportation Alternatives Program completed local mass transit bicycle trip support hardware. A dedicated Web portal (www.CoastalBendInMotion.org) was maintained to disseminate the mobility plan and performance measurement data collected to track implementation. The MPO also maintained three primary tools for virtual data collection, all of which are functional and are yielding high volumes of quality data about stakeholder priorities for mobility including an on-line mapping tool to capture where users ride or where they would like to ride if the conditions for cycling improved, promoted Strava smartphone application that allows users to log real-time data about their rides, and an on-line survey about riding habits, needs and perceived obstacles to cycling as transportation,

Path Forward for Mobility Planning for Year 6

The Corpus Christi MPO plans to participate in the Partnership. The MPO plans to work with the Pollution Prevention Partnership, a community outreach program of Texas A&M University - Corpus Christi to make the public aware of regional air quality issues and will support the public outreach efforts for TCEQ and EPA reporting services.

Bike Share Program

The Bike Share Program in Corpus Christi was discontinued in November 2019 when private sector funding dissolved. From May 2019 – November 2019, there were 2,741 trips taken on through the Bike Share Program.

RTA Van Share and Community Shuttle Program

Path Forward for Van Share Program

The Chair will continue to promote the RTA Van Share program.

Van Share and Community Shuttle Accomplishments (May 2019 – December 2019)

The chart posted below reflects the Van Share program accomplishments for May 2019 – December 2019.

2019 Vanpool				
Field	Average Weekday Schedule	Average Saturday Schedule	Average Sunday Schedule	Annual Total
Vehicles in Operation	22	5	5	
TOTAL ACTUAL VEHICLE MILES	1,353	439	370	392,928
TOTAL ACTUAL VEHICLE HOURS	30	10	8	8,674
SERVICES CONSUMED				
Total Monthly Ridership Unlinked Passenger Trips (UPT):	219	67	38	62,327
SERVICES OPERATED (DAYS)	261	52	46	359
Field	Total Weekday Schedule	Total Saturday Schedule	Total Sunday Schedule	Annual Total
Days Operated				

During this same time, the RTA provided shuttle services to 18,912 riders over a total of 8,657 miles to numerous community events: removing thousands of vehicles from the road.

SPECIAL MOVEMENT EVENT	# Passenger Trips	Miles	Hours	Date	Days
May-19					
American GI Forum	59	93.0	10.25	5/1/2019	1
Buccaneer Headquarters	79	27.0	5.50	5/2/2019	1
2019 Buccaneer Parade	250	258.0	258.00	5/4/2019	1
TAMU-CC Shuttle	528	358.0	34.78	5/15,16,17/2019	3
Beach to Bay Marathon Race	7136	2,335.0	124.98	5/18/19	1
June-19					
City Evacuation Drill	16	33.0	16.88	6/21/2019	1
Summer Camp	288	1,849.0	46.22	6/5 to 6/26/2019	16
July-19					
Big Bang Celebration	1409	279.0	55.23	7/4/2019	1
September-19					
C.C. City Hall Officials to Exxon Refinery	7	54.0	5.00	9/12/2019	1
TAMU-CC Track & Field Events	61	75.0	3.73	9/21/2019	1

October-19					
JAZZ Festival	1157	2,248.0	146.55	10/18,19,20/2019	3
American Cancer Walk	1092	90.0	17.08	10/19/20	1
November-19					
Dia De Los Muertos	4468	226.0	74.20	11/2/2019	1
Movement of City Officials	35	42.0	3.83	11/7/2019	1
Staging of bus	0	15.0	2.00	11/7/2019	1
Run the Runway Race @ CC Airport	395	45.0	7.66	11/23/2019	1
Miller High-vs-Veterans Memorial High Football Shuttle	739	276.0	35.70	11/29/2019	1
December-19					
Veterans Memorial High-vs-San Antonio Football Shuttle	135	143.0	20.20	12/6/2019	1
2019 Feast of Sharing	947	65.0	5.00	12/14/19	1
2019 Wreaths for Veterans @ VA Cemetery Shuttle	111	146.0	20.68	12/14/2019	1

Green Building Initiatives

Corpus Christi home builders lead an initiative for “green” building titled “Coastal Bend GreenBuilt”. The project includes a checklist and assigns a point value for each aspect of green initiatives built into a home. A copy of the checklist was provided in the Year 2 report (Appendix C). From May 2019 – December 2019, approximately 70 certified Greenbuilt homes were built.

Port of Corpus Christi Emissions Inventory

In September 2019, an emissions inventory of Port of Corpus Christi activities was published and presented. The emissions inventory was performed in 2017 by Star Crest. The inventory reflected significant reductions in emissions from an emissions inventory performed in 2013. *Figure 4*

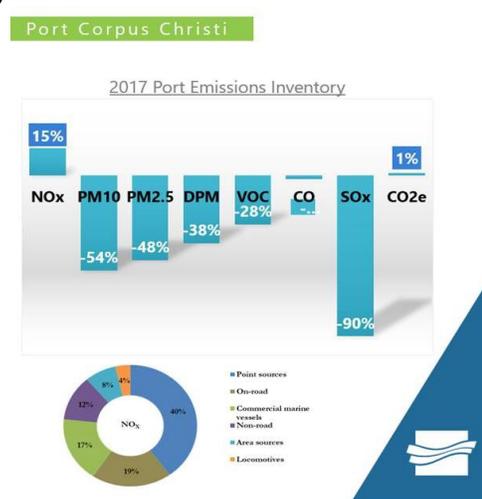


Figure 4

Much of the decrease in SOx emissions was the result of EPA MARCOM rules lowering the allowable level of sulfur in fuel utilized by any ship in US waters; however, the Port of Corpus Christi also has an anti-idle policy for all Port vehicles and equipment, purchases 100% green energy, purchased highest tier engines available on the market including 5 CNG vehicles and equipment, emissions tests their fleet, performs monitoring of pm at a bulk terminal, and installed a new more efficient crane at a dock. *Attachment 6.*

This appendix reflects the major highlights of the Year 5 Ozone Advance Report submitted to EPA. To view the complete Year 5 Annual Report including details, charts, and attachments, please visit <https://www.epa.gov/advance/texas-corpus-christi>

APPENDIX H
ANNUAL REPORT FOR 2020 (Year 6)

Appendix H

EMISSIONS REDUCTION ACTIVITIES PERFORMED - YEAR 6 (2020)

Air Quality Education Programs Path Forward Plan for 2020

The Partnership webpage and Facebook page will continue in Year 6. Briefings and presentations about the importance of air quality and emission reduction recommendations will continue throughout the community in Year 6.

The Port of Corpus Christi has sponsored and commissioned a study to be performed by Dr. Jim Lee at Texas A&M University-Corpus Christi to identify the annual cost to the Corpus Christi urban airshed should the airshed be declared nonattainment. The study should be in presentation form by Summer of 2020 and will be utilized as an impressive tool in briefings and presentations to demonstrate the severe consequences of non-attainment and benefits of employing voluntary emission reduction activities.

The Port of Corpus Christi has also agreed to sponsor the graphics, production, and printing of a distribution piece for regional economic development corporations to provide to business and industry operating in or seeking to operate in the airshed. The distribution piece will include a letter from the Partnership, a checklist of emission reduction requirements, and letters of support from airshed elected officials and leaders. The piece is anticipated to be available by Summer 2020.

Air Quality Education Accomplishments in 2020

The Partnership Facebook page (facebook.com/ccairquality) reached approximately 64 people in 2020. During the same time period, the Partnership website (www.cctexas.com/planning-esi/environmental-strategic-initiatives-esi/cc-air-quality-group) experienced 640 hits and the Pollution Prevention Partnership Air Quality Website (outreach.tamucc.edu/p3/) enjoyed 2,038 hits.

In May of 2020, communications were sent to stakeholders that included instructions on how to register for elevated ozone alerts and forecasts via AirNow. The local newspaper continued daily postings of AQI information. A comparison of area ozone monitor readings from March/April 2019 and March/April 2020 was performed to communicate the possible impact of mobile sources on ozone levels during a typical commuting to work and school environment vs. the “stay-at-home-order” environment that occurred due to the Corona virus. A decrease of 25% in ozone levels occurred during the “stay at home order” March/April 2020 time period. This information was shared with the local newspaper and promoted the potential environmental and public health benefits of alternative transportation choices and mobility planning. Numerous other education efforts were also made by group stakeholder Pollution Prevention Partnership and are cited on page 7 and attachment 5 of this report.

Dr. Jim Lee with Texas A&M University-Corpus Christi completed the study on the local cost of non-attainment of air quality standards in late March of 2020 and the study was

publicly released in May 2020. The study determined an annual cost of a marginal non-attainment designation for the Corpus Christi urban airshed of \$586,000,000 - \$1,700,000,000 for a minimum of 23 years. The results of the study were presented to the Port of Corpus Christi Commissioners, San Patricio County Commissioners, Port Industry managers, the Regional Transportation Authority Board, the Nueces County Judge, local environmental groups, and the local NPR station KEDT. Identifying the severe cost associated with non-attainment that our specific airshed would personally experience served as an effective tool to not only educate the community about the importance of ozone attainment but also instilling a call to action to continue and increase local efforts to remain in attainment of ozone standards. A copy of the study and its results can be found at

<https://www.cctexas.com/sites/default/files/costofnonattainmentstudy.pdf>

The emission reduction and policy distribution piece for area regional development corporations was developed, formatted, designed, and prepared for printing.

Air Quality Briefing Accomplishments in 2020

Briefings were provided to numerous community groups and leaders about current air quality issues and challenges, the importance of attaining air quality standards, the results of the local cost of non-attainment study, and recommendations for emission reduction activities. Leaders that received briefings included Nueces County Commissioners, San Patricio County Commissioners, Port of Corpus Christi Commissioners, Coastal Bend Bays Foundation, Port Industry Managers and Technical Committee, and the Regional Transportation Authority Board.

Path Forward for Air Quality Education and Briefings for Year 7

The Partnership webpage and Facebook page will continue in Year 7. Briefings and presentations about the importance of air quality and emission reduction recommendations will continue throughout the community in Year 7. The local cost of non-attainment of ozone standards study will continue to be promoted in the community. When the Partnership is fully transitioned with the Board of Directors and Executive Director established, the distribution piece for the Regional Economic Development Corporations will be presented for adoption.

Air Quality Curricula

Path Forward Plan for 2020

Area industry is considering funding for the continuation of an air quality curricula to be delivered to area 5th grade classes.

Air Quality Curricula Accomplishments 2020

Local elementary schools were closed for in-class learning and challenged with the new system of remotely producing and providing lessons due to Covid 19 issues and stay-at-home orders; therefore, air quality curricula was not delivered in 2020.

Path Forward for Air Quality Curricula for Year 7

Industry will meet to discuss funding air quality curricula for Year 7.

Monitoring and Research

Path Forward Plan for 2020

The Corpus Christi urban airshed was allocated \$280,000 from legislative Rider funding to perform monitoring activities. City of Corpus Christi representatives plan to have receipt of the funding approved by City Council, finalization and approval of a work plan, and selection of contractors to accomplish the work plan deliverables in Year 6.

Monitoring and Research Accomplishments 2020

A monitoring workplan for three (3) monitors was accepted. Old equipment at the 3 existing pad sites was found to be unsalvageable and new monitoring equipment at all three sites was required. A subcontractor was identified and a contract executed to install and oversee the monitors.

Path Forward for Monitoring and Research for Year 7

The subcontractor anticipates new monitors on-line by the end of April 2021, to run through Ozone season.

Clean Fleet

Path Forward Plan for 2020

The Pollution Prevention Partnership (P3) will continue to participate in the Coastal Bend Air Quality Partnership, and other policy related forums, and meetings. P3 will continue presenting Ozone reduction strategies and education at conferences, health fairs, meetings, and workshops. The emissions testing programs will be promoted at these venues and implemented on site when possible, funding contingent. P3 will add an electric lawn equipment section to the P3 web site.

Clean Fleet and P3 will continue our current affiliations and partnerships with EPA SmartWay, Texas Department of Transportation Drive Clean Across Texas, and The Port of Corpus Christi. P3 will promote these partnerships and associated collateral material in person, on the web, and social media.

P3 will continue providing free voluntary emissions testing for private and public fleets and will continue funding repairs for qualified private vehicles with pollution related mechanical issues as long as funding is available. The screening protocol will continue to use tailpipe gas analysis, gas cap pressure testing, and Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). AutoCheck will replace missing tire valve stem caps for all participants to reduce incidents of low tire pressure due to dirty air valves.

P3 will continue to look for funding sources that will allow them to expand existing services or begin new programs such as an electric lawn equipment subsidy for gasoline engine exchange.

Clean Fleet Accomplishments 2020

With supplemental funding from The Port of Corpus Christi, Texas A&M University-Corpus Christi administered the Pollution Prevention Partnership (P3), Clean Fleet, and AutoCheck program. In combination these programs implemented a multipoint strategy to reduce ozone through voluntary emissions testing of private and business vehicles, repair of private vehicles, reports to fleet managers, ozone action training and awareness, distributions of tire gauges and literature from local, state, and federal air quality programs, and participation in policy planning meetings and forums.

The AutoCheck Supplemental Environmental Program (SEP) administered by P3 screens for pollution issues by tailpipe gas analysis, gas cap pressure testing, and reading Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). Qualified polluting vehicles are issued a voucher for repairs. AutoCheck also replaces missing tire valve stem caps for all participants to reduce incidents of low tire pressure due to dirty air valves. The repairs made by the AutoCheck SEP are performed with penalty monies from a Texas Commission on Environmental Quality enforcement action.

In Calendar year 2020, P3 held 34 vehicle emissions testing events where 262 vehicles were tested for emissions and OBD-II codes. This included a partnership with a fast-food franchise in which delivery driver vehicles were tested. **Attachment 4.** Gas Cap and Evaporative Control System repairs were made to 9 vehicles, and 16 non-evaporative repairs were made resulting in an estimated 1,732 lbs. of hydrocarbon (HC) emissions and 6,781 lbs. of carbon monoxide (CO) directly reduced annually. Preventive repairs contributed additional but unquantifiable reductions in HC, CO, and Nitrogen Oxides (NO_x). **Attachment 5**

P3 provided ozone-reduction strategy, education, tools, service, and advocacy at 19 educational and policy meetings. **Attachment 6**

P3 is an EPA SmartWay affiliate and a Texas Department of Transportation Drive Clean Across Texas affiliate. Promotional and educational material from these programs are distributed to drivers directly at events, through our web site (<http://outreach.tamucc.edu/p3/index.html>), and the Community Outreach Facebook account (<https://www.facebook.com/Community-Outreach-at-Texas-AM-University-Corpus-Christi-110752215660568/>) the P3 and AutoCheck websites received 2,038 pageviews in 2020.

Information about green scaping and electric lawn equipment was gathered for the website but has not yet been formatted and published.

Path Forward for Clean Fleet for Year 7

In 2021 The Pollution Prevention Partnership (P3) will continue to participate in the Coastal Bend Air Quality Partnership and assist with transition to a non-profit entity. P3 will also participate in other policy related forums, and meetings. P3 will present Ozone reduction strategies and education at conferences, health fairs, meetings, and

workshops. The emissions testing programs will be promoted at these venues and implemented on site when possible, funding contingent.

Clean Fleet and P3 will continue our current affiliation with EPA SmartWay and increase efforts to recruit one or more local SmartWay partners. Partnerships with Texas Department of Transportation Drive Clean Across Texas, and The Port of Corpus Christi will continue. P3 will promote these partnerships and associated collateral material in person, on the web, and social media.

P3 will continue providing free voluntary emissions testing for private and public fleets and continue funding repairs for qualified private vehicles with pollution related mechanical issues as long as funding is available. The screening protocol will continue to use tailpipe gas analysis, gas cap pressure testing, and Advanced Onboard Diagnostic System (OBD-II) Diagnostic Troubleshooting Codes (DTC). AutoCheck will replace missing tire valve stem caps for all participants to reduce incidents of low tire pressure due to dirty air valves.

P3 will publish electric lawn equipment and greenscaping sections on the P3 website.

P3 will continue to look for funding sources to expand existing services or begin new programs such as an electric lawn equipment subsidy for gasoline engine exchange.

Use of IR Cameras

Path Forward Plan for 2020

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Use of IR Camera Accomplishments 2020

Several stakeholders employed the use of IR cameras in 2020. A table capturing the overall use of IR cameras in addition to other volunteer activities is included on page 13 of this report.

Path Forward for Use of IR Cameras for Year 7.

Industry plans to continue the use of IR cameras to detect fugitive emissions.

Corpus Christi Army Depot (CCAD) Ozone Action Day Notifications

Path Forward Plan for 2020

CCAD will continue to provide all employees with notifications when Ozone Action Days are declared and offer voluntary actions to take during and after work periods.

CCAD Notifications and Accomplishments 2020

CCAD practiced P2 by managing volatile materials in sealed containers when not in use and when managed as waste. CCAD and NASCC continued cooperation with local city bus service which is available onsite daily for employee transportation to and from the worksite. Elevated ozone level notification was set up for distribution.

Path Forward for Ozone Notification for CCAD for Year 7

CCAD will be replacing old paint booths which were equipped with dated pollution control technology. The new paint booths are coming online and in planning via NSR amendment application. DoD will be implementing non-chromate surface coatings with lower VOC content nationwide. DoD is testing and implementing toxic metal reductions (TMR) by replacing Chrome VI electroplating solutions with less toxic solutions. CCAD plans to continue to inform employees of ozone action days and emissions reduction recommendations and employ pollution prevention initiatives for Year 7.

Production of Low Reid Vapor Pressure (LRVP) Gasoline

Path Forward Plan for 2020

Industry plans to consider the continuation of producing LRVP.

Production of LRVP Gasoline Accomplishments 2020

Industry did not produce LRVP in 2020.

Operation of Public Use Compressed Natural Gas (CNG) Fueling Facilities

Path Forward Plan for 2020

The City currently has one (1) CNG Station located on Ayers St. that is available for City and Public use and one (1) Station located on Civitan Dr. that serves as a backup.

The City will partner with the Texas Natural Gas Vehicle (NGV) Alliance in promoting to the public and private fleets, the use and benefits of natural gas vehicles. The City will sponsor CNG workshops with the Greater Houston NGV Alliance.

Public Use CNG Fueling Facilities Accomplishments 2020

The Ayers St. CNG fueling facility remained available for public use in 2020. There was an increase of 7 new customers utilizing the CNG fueling facility in 2020.

Path Forward for Public Use CNG Fueling Facilities for Year 7

The City will continue to operate the CNG fueling facility and promote public use of the facility in Year 7. The Gas Department plans to conduct public outreach efforts promoting CNG fuel as a cleaner burning alternative to gasoline and diesel.

Electric Vehicle Infrastructure

There are 9 public charging facilities for electric vehicles in the airshed. Sites include La Palmera; a major shopping mall, several vehicle dealerships, and area hotels.

City of Corpus Christi Purchase of CNG Vehicles

Path Forward Plan for 2020

The City of Corpus Christi plans to purchase twenty-two (22) CNG bi-fuel and dedicated vehicles in 2020 to replace aging fleet.

City of Corpus Christi Purchase of CNG Vehicles Accomplishments 2020

The City removed fifteen (15) vehicles from service and replaced them with CNG bi-fuel and dedicated vehicles.

Path Forward for City of Corpus Christi Purchase of CNG Vehicles Year 7

There are plans to replace twenty (20) vehicles with CNG bi-fuel and dedicated vehicles.

RTA Purchase of CNG Vehicles

RTA Purchase of CNG Vehicles Accomplishments 2020

RTA did not purchase any new CNG or Electric vehicles in 2020.

MPO Assistance with Mobility Planning

Path Forward Plan for 2020

The Corpus Christi MPO plans to participate in the Partnership. The MPO plans to work with the Pollution Prevention Partnership, a community outreach program of Texas A&M University - Corpus Christi to make the public aware of regional air quality issues and will support the public outreach efforts for TCEQ and EPA reporting services.

MPO Assistance with Mobility Planning Accomplishments 2020

The MPO staff supported regional planning to address mitigation of environmental, historic preservation, stormwater, and air quality impacts of transportation. MPO staff also researched air quality related articles and reports regarding air quality and transportation planning.

Path Forward for Mobility Planning for Year 7

The MPO staff will continue to support transportation planning programs and research that seek to reduce transportation related air emissions. The MPO will update and modify the Air Quality section of the MPO website to enable visitors to the site to be able to link to air quality reports and conditions.

RTA Van Share and Community Shuttle Program

Path Forward Plan for 2020

The Chair will continue to promote the RTA Van Share program.

Van Share and Community Shuttle Accomplishments 2020

The RTA VanShare Program provided 487,589 miles of service for 45,341 trips: removing thousands of vehicles from the road in 2020. The chart posted below reflects the Van Share program accomplishments for 2020.

2020 Vanpool				
Field	Average Weekday Schedule	Average Saturday Schedule	Average Sunday Schedule	Annual Total
Vehicles in Operation	14	6	6	
TOTAL ACTUAL VEHICLE MILES	1,611	643	617	487,589
TOTAL ACTUAL VEHICLE HOURS	29	11	10	8,680
SERVICES CONSUMED				
Total Monthly Ridership Unlinked Passenger Trips (UPT):	155	50	40	45,341
SERVICES OPERATED (DAYS)	262	52	52	366

RTA provided shuttle services to 762 riders over a total of 854 miles in 2020, removing hundreds of vehicles from the road.

SPECIAL MOVEMENT EVENT	# Passenger Trips	Miles	Hours	Date	Days
January-20					
Autonomous Shuttle	20	75	2.8	1/14/20	1
MLK March	375	70	9.03	1/20/20	1
Autonomous Shuttle	15	79	4.33	1/21/20	1
Staging Vehicle for Rt 100 – The Surge	0	2	5.65	2/1/20	1
City of CC & Chamber Tour	71	122	6.66	2/4/20	1
City Manager Tour	24	24	1.92	2/5/20	1
Staging Vehicle for Rt 100 – The Surge	0	2	4	2/15/20	1
Staging Vehicle for Rt 100 – The Surge	0	3.5	3.75	2/29/20	1
CCIA Maintenance Facility	104	50	6.75	3/4/20	1
CCAD Scholarship Field Trip – Buc Commission	32	59	4.53	3/6/20	1
League of Women Voters	51	18	2.62	3/7/20	1
CCPD/SWAT Training	70	317.37	13.83	6/6/20	1
CCPD Anti-Theft Press Conference	0	32	8	11/19/20	1

Green Building Initiatives

Corpus Christi home builders *Leads* initiative for “green” building titled “Coastal Bend GreenBuilt”. The project includes a checklist and assigns a point value for each aspect of green initiatives built into a home. A copy of the checklist was provided in the Year 2 report (Appendix C). In 2020, over 50 certified Greenbuilt homes were built.

Port of Corpus Christi Initiatives

Port of Corpus Christi Accomplishments 2020

In 2020, the Port of Corpus Christi (PCCA) funded a study to provide projections for the potential economic costs as the result of a hypothetical scenario of an ozone nonattainment designation for the Corpus Christi Urban Airshed. The purpose of this study was to project the economic consequences, or potential losses, to the economies in the Corpus Christi metro area and its three counties that could arise after receiving either a marginal or moderate nonattainment designation. The results of the study were published in May 2020 and a copy of the study results is attached to this report. **(Attachment 8)** Significant funding was also provided by the Port for Texas A&M

University-Corpus Christi Pollution Prevention Partnership activities, and financial support for the transition of the Coastal Bend Air Quality Partnership.

The Port continued its anti-idle policy for all Port-owned vehicles and equipment and enforced the policy through an installed Drive Cam system which identifies idling non-conformances. Also in 2020, the Port began a Port emissions inventory, and a new, more efficient electric crane was put in to operation. A list of numerous other emission reduction activities and policies undertaken by the Port of Corpus Christi in 2020 is included in the Stakeholder Initiatives Summary on page 13 of this report and in **Attachment 7** of this report.

Path Forward for Port of Corpus Christi Initiatives for Year 7

Through the Port's Strategic Plan, the Port has developed a Clean Fleet Program which is in the process of being implemented. Seven plug-in hybrid electric vehicles / hybrid electric vehicles have been ordered to replace the Administration pool vehicles. All Port-owned vehicles will be replaced with low emissions vehicles by 2023. The Port will complete its 2020 emissions inventory. The Port will continue to provide financial support for the Pollution Prevention Partnership and the Coastal Bend Air Quality Partnership. The 2020 emissions inventory will be completed, and an emission reduction study and pilot program will support the Port's planning effort to develop emission reduction programs for emissions control strategies. The Port will purchase seven (7) air monitors capable of continuously monitoring PM 10 and PM 2.5 to replace a tenant funded system at the Bulk Terminal.

Stakeholder Initiatives Summary

The following table is a summary of the frequently employed voluntary emission reduction initiatives undertaken by area stakeholders. Please note that the following table summarizes voluntary emission reduction activities undertaken by several industrial and agency stakeholders. Many respondents noted individual activities not captured in the table. Individual responses citing emission reduction activities can be found in **Attachment 7** of this report.

Activity	Cheniere (*)	Flint Hills Resources (*)	Valero Refining (*)	Citgo Refining (*)	Equistar Chemicals (*)	MPO (*)	Texas A&M Corpus Christi (*)	Port of Corpus Christi (*)	Occidental Chem (*)	Nueces County (*)	City of Corpus Christi	NuStar
Register to receive ozone elevation notifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Communicate emission tips to employees and vendors	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Provide ozone education to personnel		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Promote car-pooling	✓				✓	✓	✓	✓	✓	✓	✓	✓
Anti idle policy				✓			✓	✓	✓	✓		
Postpone delivery activities				✓	✓		✓	✓	✓	✓		✓
Require low VOC materials	✓	✓	✓	✓			✓	✓	✓	✓		✓
Require scrubbers	✓	✓	✓	✓	✓				✓			
Recommend alternative or mass transit in fence-line	✓		✓				✓			✓		
Alternative fuel fleet							✓	✓	✓	✓	✓	
Emissions test fleet							✓	✓	✓	✓		
Replace older fleet			✓	✓				✓		✓		
Repower or replace older engines		✓	✓		✓		✓	✓	✓	✓	✓	
Filter traps and DOCs on diesel fleet									✓	✓		
Use low sulfur diesel	✓	✓	✓	✓			✓	✓	✓	✓	✓	
Flare reduction		✓	✓	✓	✓				✓			
Produce low sulfur diesel		✓	✓	✓								
Produce low RVP gasoline												
Utilization of IR cameras for inspections	✓	✓	✓	✓	✓					✓		

Activity	Cheniere (*)	Flint Hills Resources (*)	Valero Refining (*)	Citgo Refining (*)	Equistar Chemicals (*)	MPO (*)	Texas A&M Corpus Christi (*)	Port of Corpus Christi (*)	Occidental Chem (*)	Nueces County (*)	City of Corpus Christi	NuStar
Routine inspections for fugitive emissions	✓	✓	✓	✓	✓		✓		✓	✓		
Low NOx burners	✓	✓	✓	✓	✓				✓	✓		
Flue gas recirculation		✓		✓					✓			
Vapor recovery		✓	✓	✓	✓				✓			
Low emitting tank roofs		✓	✓	✓	✓				✓			
Thermal Oxidizer		✓	✓	✓					✓			
Fired source alarm controls			✓		✓							
Routine storage tank inspections		✓	✓	✓	✓				✓			
Flare gas analyzer		✓	✓	✓	✓				✓			
Energy reduction programs			✓	✓	✓		✓	✓		✓	✓	
Enclosed materials storage and conveyors								✓				

*Numerous additional voluntary emission reduction practices take place at these facilities and are described in their attached letters (Attachment 7)