

**CORPUS CHRISTI OZONE ADVANCE
ANNUAL REPORT: MAY 2016– APRIL 2017**

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CORPUS CHRISTI OZONE ADVANCE PROGRAM

ANNUAL REPORT MAY 2016 – APRIL 2017

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 to the EPA initiating Corpus Christi'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 of time; 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. 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. In addition to reporting on the Path Forward Letter committed voluntary emission reduction activities, each year's report included commitments that "look forward" to future years beyond the Path Forward committed activities and schedule.

The following is the annual report for the Corpus Christi Ozone Advance Year 3 activities. Year 3 activities include a continuation of the Path Forward Letter is commitments as well as additional "looking forward" commitments that took place from May 2016 – April 2017.

Corpus Christi Air Quality Group Background

The Group was established in 1995 to address National Ambient Air Quality Standards (NAAQS) ozone attainment issues for the Corpus Christi airshed. The Group is made up of volunteers and does not have funding or staff. Participants in the Group include individuals from area municipal and county government, business and industry, local universities, public agencies, a regional planning organization, the military and the news media. The broad stakeholder representation within the Group works collaboratively to design and deliver effective strategies that are suitable for the Corpus Christi area. The group meets quarterly in public facilities such as Texas A&M University-Corpus Christi, conference centers, etc. and all meetings are open to the public. Each participant of the Group receives a meeting invitation and agenda, meeting notes that include meeting discussions and presentations, and group recommendations.

During the period of May 2016 – Aril 2017, the Group met on July 21 and October 28, 2016, and January 10, and April 7, 2017. Included in this report (*Attachment A*) is a communication list for the Group.

Corpus Christi Ozone Advance Goal

The goal of the Corpus Christi 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 keep Nueces County and San Patricio County in attainment with the 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, may not exceed 70 ppb.

Corpus Christi 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.

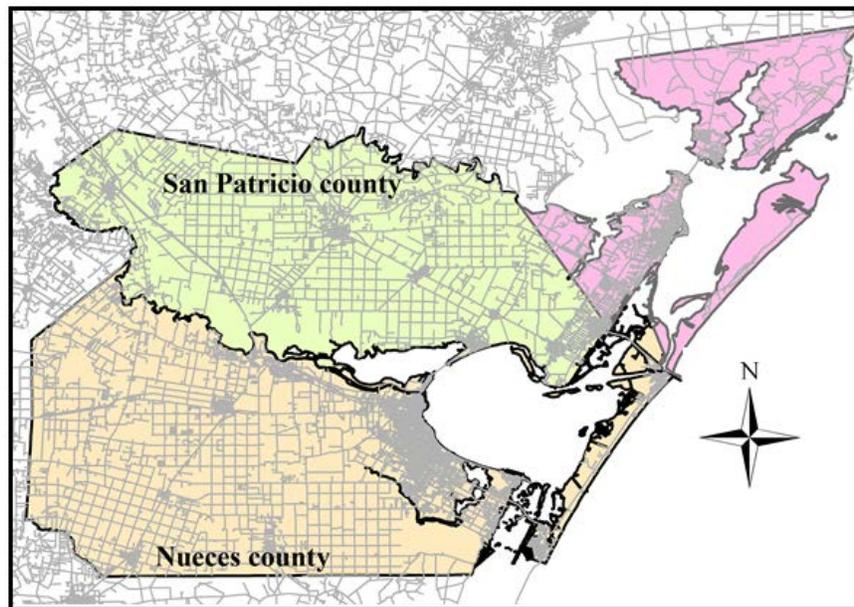


Figure 1: Map of Corpus Christi Urban Airshed

The region is a large urbanized area with a number of industrial point sources of air emissions and a concentration of mobile sources. The two counties are home to the nation's fourth busiest deep-water port with access to the Gulf of Mexico and the Gulf Intracoastal Waterway, and are home to a large 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.

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.

Additional ozone monitors for research purposes only are operated by Group participant and stakeholder Texas A&M University-Kingsville/University of North Texas (TAMUK/UNT)

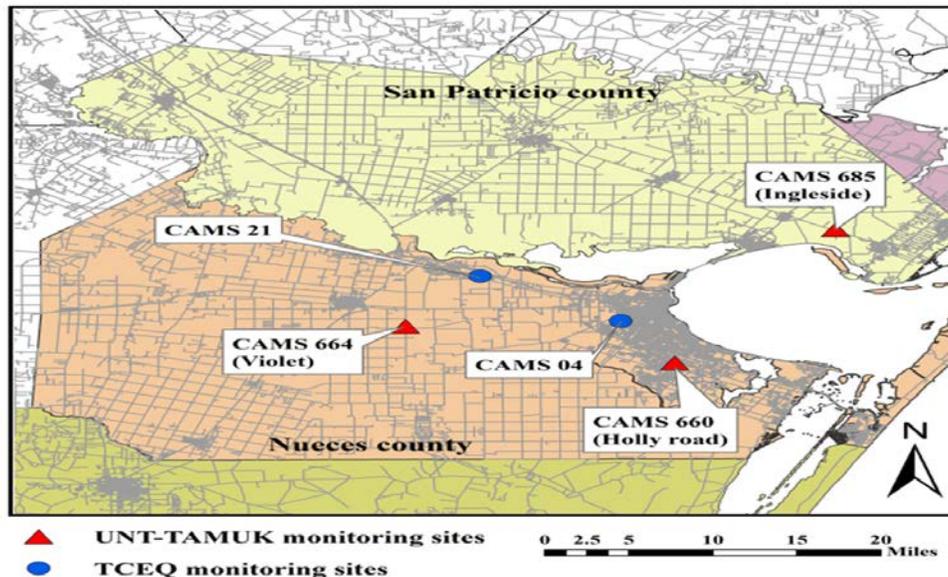


Figure 2: Map of TCEQ regulatory air monitor sites and TAMUK/UNT research monitor sites.

Currently, the airshed is in attainment of the NAAQS for ozone at a current design value of 64 ppb at CAMS 4 and 63 ppb at CAMS 21 year end 2016. The airshed has experienced an overall decreasing trend in ozone values.

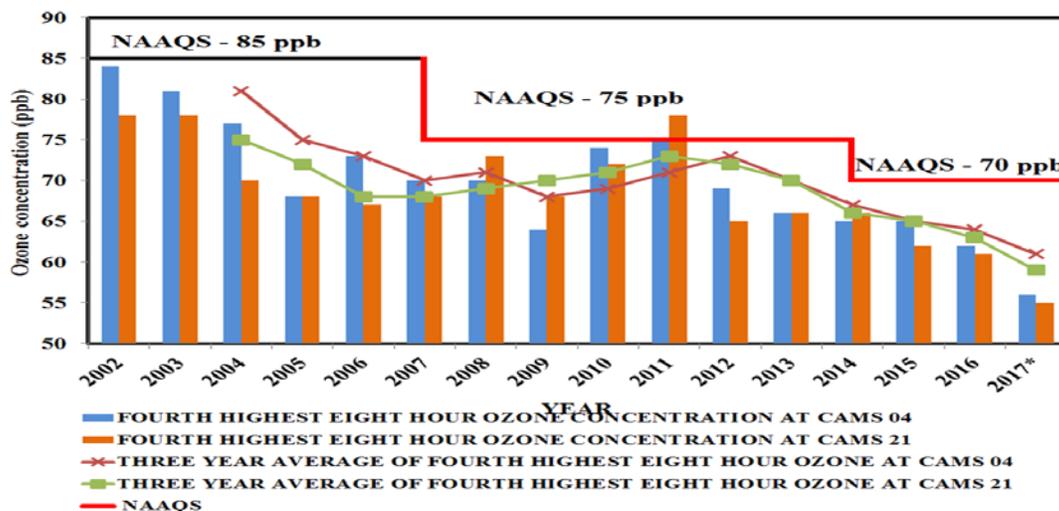


Figure 3: Corpus Christi Ozone Design Trends at TCEQ regulatory monitors CAMS 4 and CAMS 21

PATH FORWARD COMMITTED EMISSIONS REDUCTION ACTIVITIES PERFORMED THROUGH MAY 2016 – APRIL 2017 (Year 3)

Port of Corpus Christi and Construction Emissions Inventory

1. Path Forward Commitment; Emissions Inventory (May 2014-May 2016)

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 of funding the Year 1 and 2 work plan for a total amount of \$153,500 and StarCrest will perform those activities.

Status of 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 vessel, and rail) and the construction equipment 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.

Future Path Forward Commitments

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.

Establishment of Air Quality Position and Program

2. Path Forward Year 1 - Funding Education Position (May 2014 – May 2015)

The Group will work with stakeholders and potential sponsors to try 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 of any community that strives to maintain healthy air quality.

Status of Funding Education Position Commitment for Year 1(May 2014 – May 2015)

The commitment of efforts to fund an education position has been met and within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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 of Funding Education Position- Year 2 (May 2015-May 2016)

Meetings during Year 2 (May 2015-May 2016) with local entities discussing possible funding for the position were also unsuccessful. Numerous efforts to meet the commitment and obtain funding for a position that delivers a community-wide education campaign in Year 2 (May 2015-May 2016) 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.

Path Forward Year 2 – Establish a Funded Education Position (May 2015-May 2016)

If funded in Year 1, a dedicated fulltime position will be secured and a community wide public education program for air quality will begin. This position will be responsible for delivering a community-wide air quality education program that will take advantage of the many EPA resources already available such as Ozone Day school flags, brochures, website, social media messaging resources, posters, school curricula and more.

Status of Establishing a Funded Education Position in Year 2 (May 2015-May 2016)

This commitment has not been met. Despite a concerted effort in Years 1 and 2, (May 2014-May 2016) 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.

Establishment of an Air Quality Position and Program Commitment Revision

There is no indication through the many Year 1 and Year 2 (2014-2016) 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 (May 2016-May 2017)

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 Education Commitment for Year 3 (May 2016-May 2017)

This commitment has been met and within the committed schedule. (May 2016-May 2017). 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>. Please see additional Pollution Prevention Partnership cited outreach activities on page 23 of this report.

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. A copy of this memo and list of recommendations is included in this report as *Attachment B*.

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. A copy of this document is included in this report as *Attachment C*.

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 (May 2017-May 2018)

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 (*Attachment D*) to all stakeholders.

Please see Pollution Prevention Partnership cited Path Forward for Year 4 activities on page 24 of this report.

Air Quality Curricula

3. Air Quality Curricula Path Forward Commitment for Year 2 (May 2015-May 2016)

An Area Industry funded air quality curricula will be delivered to 5th grade classes.

Status of Air Quality Curricula Commitment for Year 2 (May 2015-May 2016)

The commitment has been met and within the committed schedule (May 2015-May 2016). 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. Between May 2015-May 2016, a total of 175 students received the curricula. Students were pre tested 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 (May 2016-May 2017)

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 Air Quality Curricula Commitment for Year 3 (May 2016-May 2017)

The air quality curricula commitment was met and within the committed schedule of May 2016-May 2017. During that time, 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 (May 2017-May 2018)

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

Monitoring

4. Path Forward Commitment for Monitoring Year 1 and Year 2 (May 2014-May 2016)

Through TCEQ funding provided by the 83rd Texas Legislature, the City of Corpus Christi has secured \$596,195.00 in funding for a two-year work plan to implement numerous voluntary emissions reductions studies and programs.

A summarized scope of work follows:

Research, Modeling, Monitoring

Operate and maintain the three research grade monitoring stations within Nueces and San Patricio counties. These include:

- an upwind site at the waste water 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.

Status of Monitoring Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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 (May 2015-May 2016)

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 Monitoring Commitment for Year 2 (May 2015 – May 2016)

The commitment has been completed and within schedule stated in the Path Forward Plan. (May 2015-May 2016) 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.

5. Path Forward NOx Monitoring Commitment for Year 1 (May 2014-May 2015)

Conduct continuous monitoring of nitrogen oxides (NOx) concentration at an identified site during the 2014-2015 ozone season.

Status of NOx Monitoring Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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.

NOx Monitoring Path Forward for Year 2 (May 2015-May 2016)

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 NOx Monitoring Commitment for Year 2 (May 2015-May 2016)

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 NOx concentrations ranging between 1.2 ppb to 15.1 ppb were

recorded during ozone season of 2015 while daily maximum one hour NOx concentrations were observed to range between 0.7 ppb to 6.8 ppb. An was conducted to study the trends of NOx concentrations during ozone seasons of 2014 and 2015 along with identification of episode days with high ozone and NOx concentrations for further assessment of prevailing meteorological conditions and diurnal trends. During days with elevated NOx 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 NOx episode days indicated elevated concentrations during early morning, midafternoon and late evening is contributed primarily by local rush hour traffic.

6. Path Forward Commitment to Upgrade Monitors (May 2014-May 2015)

Upgrade air-monitoring equipment at the three UNT/TAMUK monitoring sites.

Status of Commitment to Upgrade Monitors for Year 1 (May 2014-May 2015)

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 have been acquired. RM Young wind sensors have been repaired and calibrated to acquire valid wind measurements.

7. Path Forward Commitment to Update Conceptual Model (May 2014-May 2016)

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.

Status of Commitment to Update Model for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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 Commitment to Upgrade Model for Year 2 (May 2015-May 2016)

The commitment has been completed and within the schedule stated in the Path Forward Plan. (May 2014-May 2016) 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 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.

Research

8. Path Forward Commitment to Update Ozone Attainment Status (May 2014-May 2016)

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.

Status of Updating Ozone Attainment Status Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan (May 2014-May 2015.) 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 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 Updating Ozone Attainment Status Commitment for Year 2 (May 2015-May 2016)

The commitment to update ozone attainment status has been completed within the schedule stated in the Path Forward Plan. (May 2014-May 2016) 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. Data from this activity is reflected in Figures 2, 3 and 4 of this report.

All modeling, monitoring and research commitments funded by the TCEQ/83rd Legislature for Year 1 and Year 2; (May 2014-May 2016) and cited above have been completed and commitments met.

Path Forward for Year 3 and 4 (May 2016-May 2018)

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 Monitoring and Research Commitment for Year 3 (May 2016-May 2017)

Status of Monitoring Commitment for Year 3 (May 2016-May 2017)

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 in Figure 2 below was submitted and approved by TCEQ on May 16, 2016.

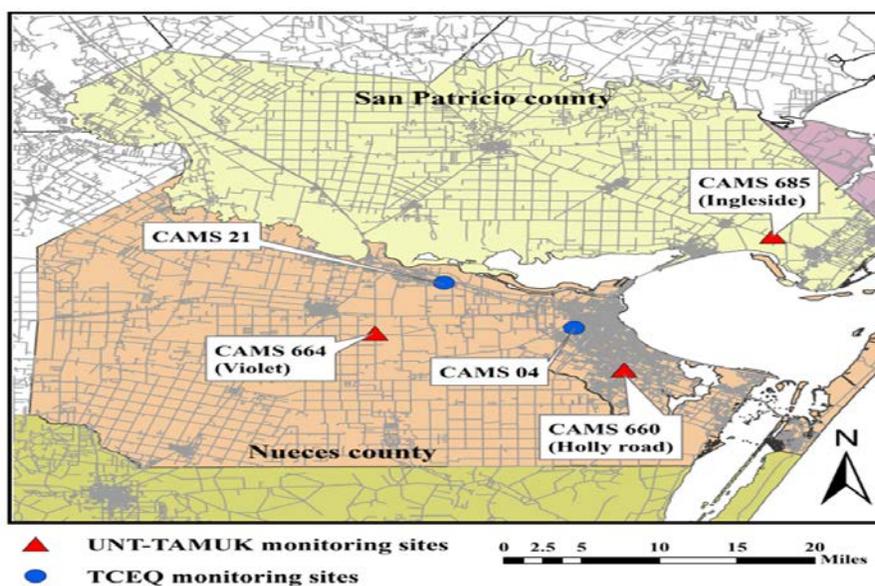


Figure 2 (repeated) Map of TCEQ regulatory monitors (CAMS 4 and CAMS 21) and TAMUK/UNT research monitors (CAMS 660, CAMS 664, and CAMS 685)

The monitoring commitment for Year 3 was met and will continue beyond the stated schedule (May 2016-May 2017). 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; 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 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 (NO_x) was performed during this time at Holly Road monitor (CAMS 660). The table below shows detailed

information of the three monitoring stations that operated during the committed schedule (May 2016-May 2017)

LOCATION (ADDRESS)	EQUIPMENT (INSTRUMENTS)	START DATE	END DATE
Holly Road site (CAMS 660) - Water pumping station operated by the City of Corpus Christi located in the growing suburbs of the south side of the City.	Teledyne API 400E Ozone analyzer, Teledyne API T200U NOx Analyzer, RM Young wind sensors, Coastal Environmental Atmospheric Temperature/Relative Humidity (AT/RH) sensor, Zeno 3200 data logger, and Enfora wireless modem.	April 1, 2016	November 1, 2016
		April 1, 2017	November 1, 2017
Violet site (CAMS 664) - Pumping station located west of Corpus Christi. Rural location surrounded by open field for several miles.	Teledyne API 400E Ozone analyzer, RM Young wind sensors, Coastal Environmental Atmospheric Temperature/Relative Humidity (AT/RH) sensor, Zeno 3200 data logger, and Enfora wireless modem.	April 1, 2016	November 1, 2016
		April 1, 2017	November 1, 2017
Ingleside site (CAMS 685) - Pumping station located in between Portland and Aransas Pass off Hwy 361. In between Sherwin Alumina plant and DuPont/Oxychem production facilities.	Teledyne API 400E Ozone analyzer, RM Young wind sensors, Coastal Environmental Atmospheric Temperature/Relative Humidity (AT/RH) sensor, Zeno 3200 data logger, and Enfora wireless modem.	April 1, 2016	November 1, 2016
		April 1, 2017	November 1, 2017

Status of Research; Updating Ozone Attainment Status Commitment for Year 3 (May 2016-May 2017)

The commitment to update the ozone attainment status has been met and beyond the stated schedule (May 2016-May 2017.) 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.

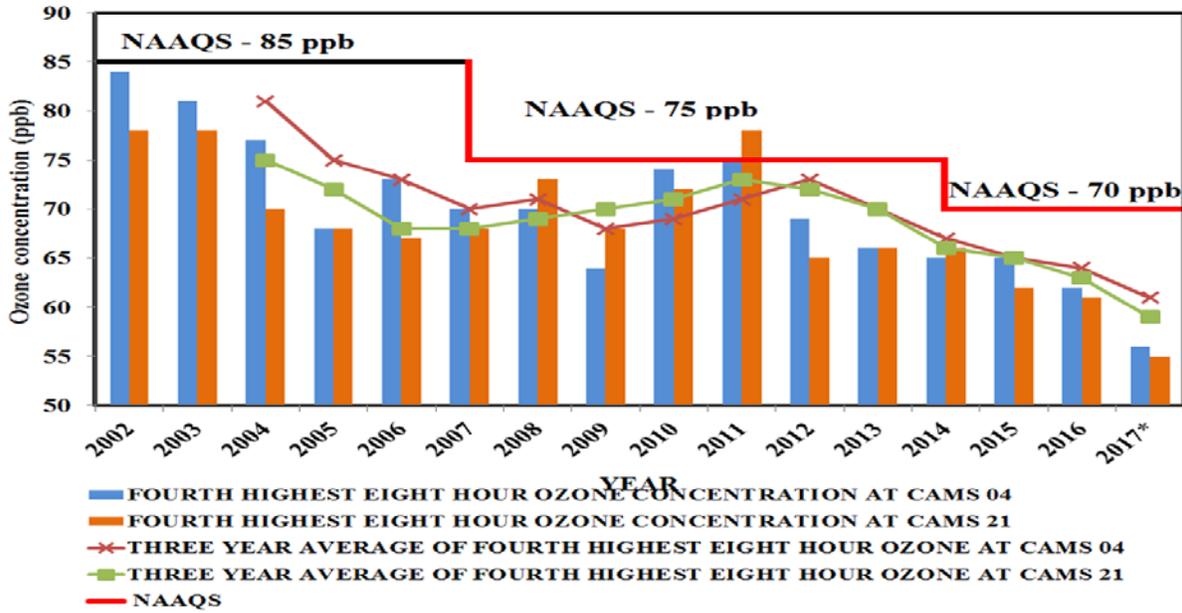


Figure 3.(repeated) Corpus Christi Ozone Design Trends at TCEQ Regulatory Monitors CAMS 4 and CAMS 21

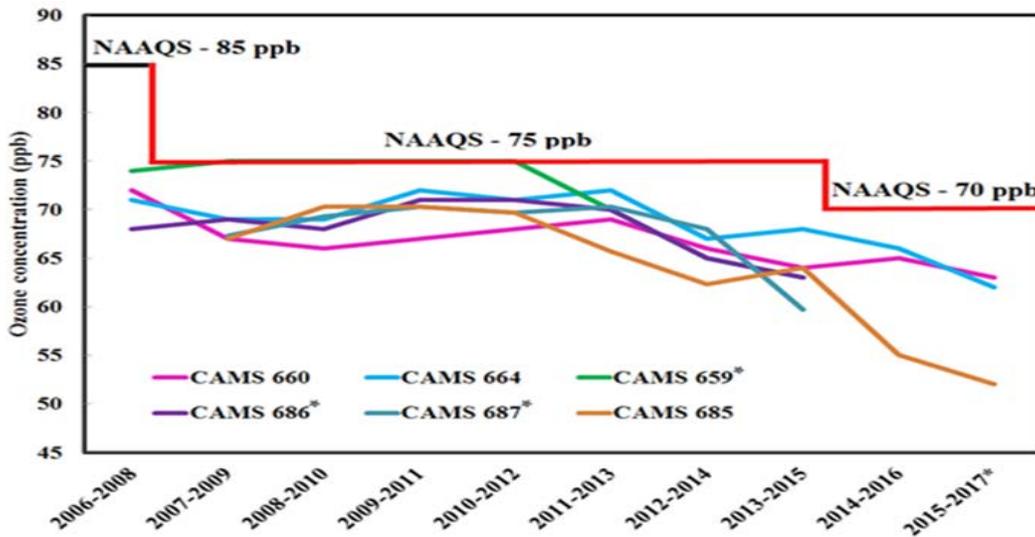


Figure 4. Corpus Christi Ozone Design Trends at TAMUK/UNT Research Monitors CAMS 660, 664, 685 *Deactivated

As demonstrated by the design value trends in Figures 3 and 4, 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 (May 2017-May 2018)

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.

Clean Fleet

9. Path Forward Commitment (May 2014-May 2016)

The Pollution Prevention Partnership (P3) and AutoCheck programs are funded by two different methods, both from the TCEQ. The P3 funding is from the Texas 84th Legislature Appropriations Rider 7 for TCEQ. The City of Corpus receives funds out of the Clean Air Account No. 151 for Strategy A.1.1 Air Quality Assessment and Planning, to reduce ozone in areas not designated as nonattainment areas and maintain compliance with federal ozone National Ambient Air Quality Standards (NAAQS). The City of Corpus Christi subcontracts some tasks of the State Implementation Plan (SIP) to Texas A&M University-Corpus Christi.

P3's tasks include, 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. Part-time employees and automobile repairs are paid for by this fund originated from penalty monies from TCEQ enforcement actions. These funds are from the legal division of TCEQ and

given directly to Texas A&M University-Corpus Christi; where P3 is housed. They do not go through the City of Corpus Christi.

The Pollution Prevention Partnership will deliver the “Clean Fleet” vehicle emissions testing program and 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.

Status of Clean Fleet Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the stated schedule. (May 2014- May 2015) 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 NOx 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 Clean Fleet Commitment for Year 2 (May 2015-May 2016)

The Clean Fleet commitment was met and within the stated schedule for Year 2 (May 2015-May 2016). 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. Spreadsheets including pre and post repair emissions and emissions reductions calculations are attached to report (Attachment F.)

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 (May 2016-May 2017)

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 NO_x; 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 Clean Fleet Commitment for Year 3 (May 2016-May 2017)

The Clean Fleet commitment exceeded commitments and beyond the stated schedule (May 2016-May 2017.) 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. A summary of the events is attached to this report (*Attachment E*).

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. Spreadsheets including pre and post repair emissions and emissions reductions calculations are attached to this report (*Attachment F*).

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 are 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. A summary of events is included in this report as *Attachment G*.

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 (May 2017-May 2018)

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 2018 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.

Use of IR Cameras

10. Path Forward Commitment (May 2014-May 2016)

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

Status of IR Camera Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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 IR Camera Commitment for Year 2 (May 2015-May 2016)

The commitment has been met and within the schedule stated in the Path Forward Plan. (May 2015-May 2016) Several area industrial facilities utilized IR cameras to detect fugitive emissions in Year 2. A table summarizing area industry's use of IR cameras in addition to numerous other voluntary initiatives can be found on page 43 of this report and supporting documentation is attached.

Status of IR Camera Commitment for Year 3 (May 2016-May 2017)

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. (May 2016-May 2017) An updated table summarizing the use of IR cameras in addition to numerous other voluntary emission reduction initiatives can be found on pages 43 and 44 of this report.

Path Forward for IR Camera Commitment for Year 4(May 2017-May 2018)

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

CCAD Ozone Action Day Notifications

11. Path Forward Commitment (May 2014-May 2016)

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.

Status of CCAD Notification Commitment for Year 1(May 2014-May 2015)

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 CCAD Notification Commitment for Year 2 (May 2015-May 2016)

There were no Ozone Action Days during Year 2 (May 2015-May 2016), however the CCAD communication system was set up and ready to launch should an Ozone Action Day be called.

Status of CCAD Notification Commitment for Year 3 (May 2016-May 2017)

There were no called Ozone Action Days during Year 3(May 2016-May 2017), 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.

Announcements of Federal and State Funding Opportunities

12. Path Forward Commitment (May 2014-May 2016)

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 work places by the Group’s Chair.

Status of Announcing Funding Commitment for Year 1(May 2014-May 2015)

The commitment has been met within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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 Announcing Funding Commitment for Year 2 (May 2015-May 2016)

The commitment has been met within the schedule stated in the Path Forward

Plan (May 2015-May 2016.) 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 Announcing Funding Commitment for Year 3 (May 2016-May 2017)

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 (May 2017-May 2018)

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.

Production of Low Reid Vapor Pressure (LRVP) Gasoline

13. Path Forward LRVP Commitment (May 2014-May 2016)

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.

Status of LRVP Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan (May 2014-May 2015.) 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 LRVP Commitment for Year 2 (May 2015-May 2016)

The commitment has been met and within the schedule stated in the Path Forward Plan (May 2015-May 2016. Several area facilities produced LRVP gasoline in Year 2. A table summarizing area production of LRVP gasoline in addition to numerous other voluntary initiatives can be found in Table 2 of this report and

supporting documentation is attached.

Status of LRVP Commitment for Year 3 (May 2016-May 2017)

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 (May 2016-May 2017.) An updated table summarizing area production of LRVP gasoline in addition to numerous other voluntary initiatives can be found on pages 43 and 44 of this report.

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

Industry plans to continue to produce LRVP in Year 4.

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

14. Path Forward Commitment for CNG Fueling Facilities (May 2014-May 2016)

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.

Status of CNG Fueling Facilities Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan. (May 2014-May 2015) 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 expect 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 and plan to purchase a minimum of 50 bi-fuel or dedicated CNG vehicles in 2015.

Status of CNG Commitment for Year 2 (May 2015-May 2016)

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 (May 2016-May 2017)

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 CNG Fueling Commitment for Year 3 (May 2016-May 2017)

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 Annville, which are areas within the city's limits

USPS Installation of CNG Fueling Station and Purchase of CNG Vehicles

15. Path Forward Commitment for USPS CNG (May 2014-May 2016)

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

Status of Commitment for USPS CNG for Year 1(May 2014-May 2015)

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

Status of Commitment for USPS CNG Year 2(May 2015-May 2016)

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 (May 2016-May 2-17)

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

Status of CNG Commitment for Year 3 (May 2016-May 2017)

The commitment has been met within the schedule (May 2016-May 2017.) The City continued to encourage partners to consider CNG vehicles.

Looking Forward to CNG for Year 4 (May 2017 – May 2018)

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

RTA Purchase of CNG Vehicles

16. Path Forward Commitment to Purchase CNG Vehicles (May 2014-May 2016)

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.

Status of Commitment to Purchase CNG Vehicles for Year 1(May 2014-May 2015)

The commitment has been met and ahead of the schedule stated in the Path Forward Plan. (May 2014-May 2015) The CCRTA replaced 23 diesel Paratransit vehicles and 20 diesel buses with CNG vehicles.

Status of Commitment to Purchase CNG Vehicles for Year 2 (May 2015-May 2016)

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 RTA Purchase of CNG Vehicles Commitment for Year 3 (May 2016-May 2017)

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).

MPO Assistance with Bicycle Transportation Planning

17. Path Forward Commitment for Bicycle Transportation Planning (May 2014-May 2016)

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, TAMUCC, and the City about the creation of new facilities, new policies, and the dissemination of public information.

Status of Commitment for Year 1(May 2014-May 2015)

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 that 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 Bicycle Transportation Planning Commitment for Year 2 (May 2015-May 2016)

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

On the basis of 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 following table summarizes the Plan’s infrastructure type and network distances.

Table 1 – Plan Infrastructure and Network Miles

Infrastructure Type	Network Miles	Percent of Network
<i>Low Cost/Rapid Implementation*</i>		
*No major capital investment required other than paint and signage		
Bicycle Boulevard	64	22
Buffered Bike Lane	6	2
<i>Strategic Capital Investments</i>		
Multi-use Sidepaths	9	3
1-way Cycle Tracks	145	50
Off-road Multi-use Trails (on storm water and old railroad easements)	66	23
	290	

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](https://ccmpo.maps.arcgis.com/apps/webappviewer/index.html?id=fd393dbf23c645f89180a818476354a7).

Path Forward for Bicycle/Mobility Planning for Year 3 (May 2016-May 2017)

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 Bicycle/Mobility Planning Commitment for Year 3 (May 2016-May 2017)

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.

Table 2 – Transportation Alternatives Program Funding Amounts

	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 offroad 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 (May 2017-May 2018)

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 offroad multi-use path.
- RTA will install bicycle trip support hardware purchased in Year 3 using Transportation Alternatives Program funds from the MPO.

Corpus Christi Air Quality Group Education Efforts

18. Path Forward Commitment (May 2014-May 2016)

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.

Status of Education Efforts Commitment for Year 1(May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan (May 2014-May 2015.) 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 Education Efforts Commitment Year 2 (May 2015-May 2016)

The commitment has been met and within the schedule stated in the Path Forward

Plan (May 2015-May 2016.) 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 (May 2016-May 2017)

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 Education Efforts Commitment for Year 3 (May 2016-May 2017)

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 (*Attachment D*) that was distributed to the Group and other stakeholders in July and October, 2016 and January and April 2017.

Please see Pollution Prevention Partnership cited education activities on page 20 of this report.

Path Forward for Education Efforts for Year 4 (May 2017-May 2018)

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.

Please see Pollution Prevention Partnership cited education activities planned for Year 4 on page 20 of this report.

Promotion of Van Share Program

19. Path Forward Commitment for Van Share (May 2014-May 2016)

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.

Status of Van Share Commitment for Year 1 (May 2014-May 2015)

The commitment has been met and within the schedule stated in the Path Forward Plan (May 2014-May 2015.) 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 work-sites. 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.

Status of Van Share Commitment for Year 2(May 2015-May 2016)

The commitment has been met and within the schedule stated in the Path Forward Plan (May 2015-May 2016.) 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.

Status of Van Share Commitment in Year 3 (May 2016-May 2017)

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 (*Attachment D*) 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.

Table 3 – Van-share Trips

CCMS VP	Total Riders	Total Miles	Total Hours	Rev. Miles	Rev. Hours	No. Trips	No. Days	No Vehicles
Jun-16	432	1,092.0	247.15	1,092.0	247.15	49	30	1
Jul-16	514	1,091.0	208.22	1,091.0	208.22	65	31	1
Aug-16	577	950.0	107.64	950.0	107.64	67	31	1
Sep-16	81	188.0	29.8	188.0	29.8	17	11	1
2016 Total	1,604	3,321.00	592.81	3,321.00	592.81	198	103	
Port Royal VP	Total Riders	Total Miles	Total Hours	Total Miles	Total Hours	No Trips	No Days	No Vehicles
Jan-16	534	11,550.0	403.00	11,397.0	392.00	143	30	4
Feb-16	407	11,133.0	394.23	5,150.0	183.00	129	29	2
Mar-16	497	11,598.0	420.80	11,116.0	405.05	146	30	2
Apr-16	491	11,388.0	424.5	11,388.0	419.50	133	30	2
May-16	663	13,299.0	515.28	13,299.0	515.28	156	31	2
Jun-16	665	12,003.0	462.75	12,003.0	462.75	142	30	2
Jul-16	831	13,249.0	512.25	13,249.0	512.25	154	31	2
Aug-16	733	12,734.0	471.78	12,734.0	471.78	150	31	2
Sep-16	570	11,420.0	463.50	11,414.0	468.00	150	30	2
Oct-16	511	10,548.0	413.47	10,548.0	413.47	141	31	2
Nov-16	454	9,411.0	354.88	9,411.0	354.88	116	30	2
Dec-16	289	6,295.0	265.52	6,295.0	265.52	96	28	3
2016 Total	6,645.00	134,628.00	5,101.96	128,004.00	4,863.48	1,656	361	
Grand Total	8,249.00	137,949.00	5,694.77	131,325.00	5,456.29	1,854.00	464.00	
Jan-17	169	3,698.0	159.15	3,698.0	159.15	62	22	2
Feb-17	316	5,903.0	265.75	5,833.0	262.75	88	25	2
Mar-17	253	6,102.0	256.75	6,102.0	256.75	95	31	2
2017 Total	738	15703	681.65	15633	678.65	245	78	
TPCO VP	Total Riders	Total Miles	Total Hours	Total Miles	Total Hours	No Trips	No Days	No Vehicles
Apr-16	780	5,908.1	338.40	5,908.1	338.40	240	30	4
May-16	744	4,632.0	349.68	4,632.0	349.68	248	31	4
Jun-16	624	3,225.0	338.40	3,225.3	338.40	240	30	4
Jul-16	744	2,914.0	349.68	2,914.0	349.68	248	31	4
Aug-16	806	5,479.0	349.68	5,478.2	349.68	248	31	4
Sep-16	600	4,022.0	338.40	4,021.9	338.40	240	30	4
Oct-16	432	4,584.0	270.72	4,584.0	270.72	192	24	4
Nov-16	440	4,964.0	255.60	4,964.0	225.60	160	20	4
Dec-16	*0	3325	118.44	3,325.0	118.44	84	21	2
2016 Total	5,170.0	39,053.1	2,709.0	39,052.5	2,679.0	1,900.0	248.0	
Jan-17	360	2,517.0	169.2	2,517.0	169.2	120	30	2
Feb-17	434	3,104.0	174.84	3,103.8	174.84	124	31	2
Mar-17	434	3,104.0	174.84	3,103.8	187.84	124	31	2
2017 Total	1,228.0	8,725.0	518.88	8,724.6	531.88	368.0	92.0	6.0

*Officials at TPCO did not write down number of Riders for December

Path Forward for Van Share for Year 4 (May 2017-May 2018)

The Chair will continue to promote the RTA Van Pool program during Year 4.

ADDITIONAL EMISSIONS REDUCTION ACTIVITIES ACCOMPLISHED MAY 2016 – APRIL 2017

Shuttles for Community Events

During Year 3; (May 2016-May 2017), the Regional Transportation Authority provided shuttle service to numerous community events, thereby removing vehicles from the road and reducing idling and congestion. Events with shuttle service provided include:

5/1/2016	Buc Days Festival	(1 bus - 2 riders)
5/6-7/2016	Fiesta de la Flor	(1 bus Fri; 4 buses Sat - 320 riders) (9 buses Fri 8 buses Sat - 12,010 riders)
5/7/2016	Cinco de Mayo Celebration	(2 buses - 11 riders)
5/21/2016	Beach to Bay Shuttle	(23 buses - 17,578 riders)
7/4/2016	July 4th Big Bang Celebration	(2 buses - 897 riders) (2 buses - 594 riders)
9/17/2016	TAMU CC Track and Field	(1 bus - 88 riders)
10/15/2016	American Cancer Society	(4 buses - 3,072 riders) (9.22 hours - 1 bus - 65 riders)
10/21-23/16	Jazz Fest	(6 buses on Fri 8 buses on Sat 4 buses on Sun - 4,381 riders)
10/29/2016	Dia de los Muertos Shuttle	(5 buses - 6,647 riders) (1 bus - 120 riders)
12/24/2016	HEB Feast of Sharing	(2 buses - 1,246 riders)
1/16/2017	MLK Parade	(2 buses - 279 riders)
3/24-25/2017	Fiesta de la Flor	(8 buses Fri 6 buses Sat - 11,643 riders) (1 bus on Fri 2 buses Sat – 186 riders)
4/1-2/2017	Naval Air Station Air Show	(4 buses each day - 656 riders)

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. As of April 2017 there have been 9,396 trips taken on the bicycles by 3,123 active members for a total of 24,131 miles.

Regional Parkway Mobility Corridor

Multiple regional partners, including the MPO, City of Corpus Christi, and Nueces County, initiated the Regional Parkway Planning and Environmental Linkages (PEL) study for two of seven segments of the Regional Parkway Mobility Corridor in 2015. This PEL is a follow up to a 2012 Feasibility Study that indicated that a regional parkway route was merited and feasible if constructed in segments of independent utility. The PEL study, approved by the MPO Transportation Policy Committee on April 4, 2014, will serve as an interim step to a full National Environmental Policy Act review of the potential project, which would reduce vehicle miles traveled and congestion—and thus fuel consumption and emissions—by providing an alternative to heavily travelled SH 358 (South Padre Island Drive). After extensive stakeholder engagement, a draft final report was published in January 2017.

Padre Island Access and Mobility Study

The City of Corpus Christi, the MPO, and other regional partners began implementing the Padre Island Access and Mobility Study in 2016 to identify mobility and access management issues along 11 miles of State Highway 361 and develop applicable transportation management strategies to mitigate those issues. The recommended strategies will be implementable over a range of time scales and are intended to help address mobility challenges in the face of projected growth and land use changes as well as environmental change.

Travel Demand Model

The City of Corpus Christi, the Corpus Christi Regional Transportation Authority, the MPO and other regional partners began implementing the Strategic Integration Feasibility Study, which will integrate transit and land use data into the regional Travel Demand Model (TDM) that is maintained by the MPO. This expansion of the scope of the TDM will enhance the accuracy and efficacy of travel demand projections, thus helping to right-size roadway classifications and informing prioritization and planning of transportation infrastructure projects to enhance efficiency.

Electric Vehicle Infrastructure

La Palmera, a major shopping mall 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.

Mobility CC

The City of Corpus Christi continued their implementation of Mobility CC, a guide for multimodal transportation. The Mobility CC document can be found at <http://www.cctexas.com/Assets/Departments/PlanningEnvironmentalServices/Files/MobilityCC.pdf>. During Year 2, a Mobility CC Project Checklist was developed. The checklist must be completed by the Project Manager of any city street project to confirm that Mobility CC recommendations for accommodating alternative transportation modes and efficient land use are being considered and applied.

During Year 3, the city continued to require all project managers to complete a Mobility CC checklist and include Mobility CC guidelines in future planning efforts such as a regional travel demand model and updates to traffic impact analysis and access management guidelines as part of the Unified Development Code.

Community Group Collaboration

The Chair of the Group continued to participate in meetings of several community groups that address air quality issues and air quality planning. Community group meetings attended by the Chair during Year 3 include the City of Corpus Christi Transportation Commission and its Bicycle and Pedestrian Advisory Committee and Mobility CC Committee, the Chamber of Commerce Infrastructure Group, and the Corpus Christi Planning Commission.

Briefings

The Chair provided several briefings to community groups and leaders about current air quality issues and challenges during Year 3. Briefings were provided to the Nueces County Commissioners regarding current ozone status and project recommendations, the Regional Health Awareness Board regarding local air quality and public health, the Corpus Christi Caller Times regarding mobile source emissions and their part in Corpus Christi's air quality, the Local Emergency Planning Committee on the importance of communicating emissions reductions recommendations and elevated ozone forecast days, the Corpus Christi Planning Commission about the air quality benefits of the Plan CC elements that included mobility planning and multi-modal transportation, and the Long Term Health Group on the status of the Corpus Christi air monitor network and ozone season 2016 data.

Please see Pollution Prevention Partnership cited briefings on page 20 of this report.

Coastal Bend GreenBuilt

Corpus Christi home builders led an initiative for "green" building entitled Coastal Bend GreenBuilt. The project includes a checklist and assigns a point value for each aspect of green initiatives built into a home. To date, one thousand, eight hundred forty-six (1,846) homes have been built to be certified as GreenBuilt in the Corpus Christi area with another One Hundred Sixty Three currently under construction.

Stakeholder Initiatives Summary

The following table is a summary of the frequently employed voluntary emission reduction initiatives undertaken by area stakeholders. Supporting letters and surveys documenting these initiatives in addition to numerous additional site specific initiatives are attached in this report as *Attachment H*.

The Corpus Christi area has a long history of successful voluntary initiatives that continue to keep our area in attainment of ozone standards, and we look forward to continued successful efforts and remaining in attainment of NAAQS for ozone.

Table 4- Summary of Stakeholder Initiatives

	Kiewit	Flint Hills Resources	Valero Refining	Citgo Refining	Lyondell/ Equistar	NuStar Energy	Texas A&M Corpus Christi	Port of Corpus Christi	Oxy/Chem	Nueces County	Voelstalpine	City of Corpus Christi	M & G Under construction
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 deliveries and 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		✓	✓	✓									

Table 4 - Summary of Stakeholder Initiatives
(continued)

	Kiewit	Flint Hills Resources	Valero Refining	Citgo Refining	Lyondell/ Equistar	NuStar Energy	Texas A&M Corpus Christi	Port of Corpus Christi	Oxy/Chem	Nueces County	Voelstalpine	City of Corpus Christi	M & G Under construction
Utilization of IR cameras for inspections		✓	✓	✓	✓						✓		
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											✓		

ATTACHMENT A

**CORPUS CHRISTI AIR QUALITY GROUP
COMMUNICATION LIST**

CORPUS CHRISTI AIR QUALITY GROUP COMMUNICATION LIST

Kuruvilla John	University of North Texas
Steven Ashely	Port of Corpus Christi
Willian Terry	Corpus Christi Independent School Dist.
Clair Garza	Valero Refining
Nick Andrade	Topaz Energy
Dale Nelson	Media
Aron Bagget	OxyChem
Curtis Taylor	Flint Hills Resources
Corpus Christi Caller Times	Media
Robert Gonzalez	Media
Richard Fenza	AirLiquide
Dipak Desai	Nueces County
Brigida Gonzalez	Corpus Christi MPO
Leah Olivarri	Chamber of Commerce
Darrell Jonas	AirLiquide
Ray Allen	Bays and Estuaries Program
Howard Fels	AEP
Kelli Coates	Valero Refining
Richard Bennett	Coastal Bend Council of Govts.
Barry Bennett	Valero Refining
ABC News	Media
Glenn Sullivan	Nueces County
Dennis Payne	Valero Refining
Bob Trebatoski	Equistar
Joe Almarez	Valero Refining
Bob Paulison	Port Industries
Matt Pastl	voestalpine
Denise Rogers	Trafigura
Sharon Montez	Regional Transportation Authority
Glenda Swierc	Oxy Ingleside Energy Center
Greg Bezdeck	Markwest
Ross Ybarra	NAS Corpus Christi
Sharon Lewis	City of Corpus Christi
Roger Tennapel	Flint Hills Resources
Ginny Cross	Corpus Christi Chamber of Commerce
John LaRue	Port of Corpus Christi
Nelda Olivos	Port of Corpus Christi
Paul Carrangelo	Port of Corpus Christi

Nancy Hutton	AEP
Sarah Garza	Port of Corpus Christi
Susan Clewis	Texas Commission on Environmental Quality
Ron Barnard	Retired, City of Corpus Christi
Tammy Buxkamper	Flint Hills Resources
Tom Tagliabue	City of Corpus Christi
Ralph Coker	Chamber of Commerce
Tom Ballou	Sherwin Alumina, retired
Saritha Karnae	Texas A&M University-Kingsville
Mark Evans	OxyChem
C. Bowen	Markwest
Chris Burnett	NuStar
Rafael DeCAstro	NuStar
D. K. Bennett	Plains Pipeline
Christopher Amy	TxDOT
Jerry Batey	TxDOT
Dana Perez	Flint Hills Resources
Shannon Parkham	oestalpine
Colleen Johnson	360factors
Mari Cuevas	Corpus Christi Community Council
Carrie Meyer	Corpus Christi resident
Yvonne Jimenez	Celanese
David Harvey	Lyondell
Foster Edwards	San Patricio County Economic Development Corp
Kelly Ruble	Texas Commission on Environmental Quality
Cathy Barnard	Oxy Ingleside Energy Center
James Haug	Port of Corpus Christi
Danielle Converse	Port of Corpus Christi
Joseph Haug	Flint Hills Resources
Craig Eckberg	NRG
Chris Abshire	Valero Refining
Meagan Marguard	Valero Refining
Paulite Fonten	Citgo Refining
Kristina Leal	City of Corpus Christi
Larry Elizondo	Citgo Refining
Robert Lamroux	Citgo Refining
Jeff Pollack	Corpus Christi MPO
Iain Vasey	Corpus Christi Regional Development Corp
Gregg 'Robertson	First Rock
Rose Collin	Port of Corpus Christi
Fred Nardini	San Patricio County Commissioner
Molly Edens	NuStar

Trent Thigpen	Pollution Prevention Partnership
Cindy Smith	TCEQ
Sonny Lopez	TCEQ
James Haley	Port of Corpus Christi
Lisa Hinojosa	Citgo Refining
Scott Peters	Lyondell
Matt Nerren	Corpus Christi Army Depot
Maria Garcia	Corpus Christi Army Depot
Veronica Alaniz	M&G Plastics
Alfredo Diaz	Flint Hills Resources
Bea Vasquez	Flint Hills Resources
Darcy Schroeder	Valero Refining
Jon Kiggans	Buckeye
Kevin Kenall	Citgo Refining
Jessica Hernandez	San Patricio County
Phyllis Cunningham	360 factors
Errol Summerlin	San Patricio County Community Member
Rose Cornelius Crawford	Citizens Alliance
Rev. Adam Carrington	Citizens Alliance
Henry Williams	Hillcrest Resident's Association

ATTACHMENT B

**CORPUS CHRISTI CHAMBER OF COMMERCE
EDUCATION**

Ozone Season is Here

Ozone season for Corpus Christi is April 1 – October 31. Ozone season is when our weather patterns and days heating up are most likely to encourage the product of ground-level ozone; a harmful pollutant that is regulated by the U S EPA.

Corpus Christi is proud to be a clean air community that is in attainment of air quality standards established by the U S EPA. Being in attainment of air quality standards not only means that Corpus Christi air is healthy for you, your family and your employees to live, work, and play in – it means that doing business in Corpus Christi is easier and less costly than doing business in a community that does not comply with air quality standards.

The Corpus Christi Air Quality Group works to make sure that Corpus Christi remains in attainment of air quality standards. The group is made up of representatives from industry, government, agencies, universities, and the general public and meets on a quarterly basis to discuss current air quality status and the development of programs and projects that seek to reduce air emissions.

There are numerous efforts a business can consider that reduce emissions and ensure Corpus Christi's continued attainment of air quality standards. Enclosed is a checklist of emission reducing recommendations compiled by the Corpus Christi Air Quality Group that we hope you will consider.

Please consider becoming a part of the Corpus Christi Air Quality Group and being a part of Corpus Christi's continued clean air success story.

For more information, please contact Gretchen Arnold; Chair of the Corpus Christi Air Quality Group at Gretchen.arnold@stx.rr.com.

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

Communications:

- 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy! <http://www.enviroflash.info/signup.cfm>
- Communicate elevated ozone forecasts to employees, vendors and contractors.
 - Include emission reduction policies or recommendations in communications.
- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
 - Provide flexible work schedules or compressed work weeks to take vehicles off the road during peak times.
 - Participate in the RTA Van Pool program. RTA will provide a van for employee commutes. Fees are dependent upon service area. More information can be found at <https://www.ccrta.org/rider-info/programs/> or calling 1-800-VAN-SHARE.
- Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre -scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

- Have an anti-idle policy for all contractor and delivery vehicles

- Postpone non-essential deliveries on elevated ozone days
- Require painters to use low VOC paints
- Require grounds crews to postpone operations on elevated ozone days
- Require vendors and contractors to use low VOC solvents
- Require vendors and contractors to use low VOC 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
- Give preference to vendors that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
- Encourage employees to have their vehicle emissions tested. Host a testing day on your site. Call AutoCheck at 825-3070
- Replace older units in fleet
- Repower or replace older engines in fleet
- Have an anti-idle policy for your fleet
- Install filter traps and DOCs on your diesel fleet
- Perform diesel retrofits
- Use low sulfur diesel fuel for your diesel fleet
- Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- Utilization of IR cameras to detect and repair fugitive emissions
- Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- Installation of low NOx burners on heaters
- Use of low NOx water heaters
- Use of flue gas recirculation
- Use of vapor recovery or incineration
- Installation of scrubbers

- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/building](http://www.energystar.gov/building)

ATTACHMENT C

**CORPUS CHRISTI AND SAN PATRICIO COUNTY
ECONOMIC DEVELOPMENT CORPORATION
EDUCATION**

Welcome to Corpus Christi!

Corpus Christi is proud to be a clean air community that is in attainment of air quality standards established by the U S EPA. Being in attainment of air quality standards not only means that Corpus Christi air is healthy for you, your family and your employees to live, work, and play in – it means that doing business in Corpus Christi is easier and less costly than doing business in a community that does not comply with air quality standards.

The Corpus Christi Air Quality Group works to make sure that Corpus Christi remains in attainment of air quality standards. The group is made up of representatives from industry, government, agencies, universities, and the general public and meets on a quarterly basis to discuss current air quality status and the development of programs and projects that seek to reduce air emissions.

There are numerous efforts a business can consider that reduce emissions and ensure Corpus Christi's continued attainment of air quality standards. Enclosed is a checklist of emission reducing recommendations compiled by the Corpus Christi Air Quality Group that we hope you will consider.

Please consider becoming a part of the Corpus Christi Air Quality Group and being a part of Corpus Christi's continued clean air success story.

For more information, please contact Gretchen Arnold; Chair of the Corpus Christi Air Quality Group at Gretchen.arnold@stx.rr.com.

Welcome to San Patricio County!

San Patricio county is proud to be a clean air community that is in attainment of air quality standards established by the U S EPA. Being in attainment of air quality standards not only means that San Patricio county air is healthy for you, your family and your employees to live, work, and play in – it means that doing business in San Patricio county is easier and less costly than doing business in a community that does not comply with air quality standards.

The Corpus Christi Air Quality Group works to make sure that Corpus Christi, Nueces ad San Patricio counties remains in attainment of air quality standards. The group is made up of representatives from industry, government, agencies, universities, and the general public and meets on a quarterly basis to discuss current air quality status and the development of programs and projects that seek to reduce air emissions.

There are numerous efforts a business can consider that reduce emissions and ensure our continued attainment of air quality standards. Enclosed is a checklist of emission reducing recommendations compiled by the Corpus Christi Air Quality Group that we hope you will consider.

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CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

Communications:

- 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: <https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy! <http://www.enviroflash.info/signup.cfm>
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- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

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- Require vendors and contractors to use scrubbers on VOC chemical extraction processes
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- Give preference to vendors that use low emissions products

Fleet

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- Emissions test your fleet and keep fleet in well maintained state
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- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
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- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

ATTACHMENT D
EMISSIONS RECOMMENDATIONS LIST

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- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
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- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into www.http://www.energystar.gov.buildings

ATTACHMENT E

CLEAN FLEET EVENT SUMMARY



Event Report

From 5/1/2016

To 4/30/2017

Report Date 4/27/2017

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
5/2/2016	Motor Monday	TAMU-CC Island Dr.	10:00 AM	6	0	6	0	0	0	0	0	0	6
5/13/2016	AutoCheck	CC Trade Center	10:00 AM	8	0	8	1	0	0	0	0	1	7
5/16/2016	Motor Monday	TAMU-CC Island Dr.	10:00 AM	2	0	2	0	0	0	0	0	0	2
5/21/2016	Autocheck	CC Trade Center	10:00 AM	9	0	9	1	1	0	0	0	2	7
5/31/2016	Tailpipe Tuesday	TAMU-CC Island Dr.	10:00 AM	6	14	20	1	0	0	0	0	3	17
6/3/2016	AutoCheck	CC Trade Center	10:00 AM	8	0	8	0	1	0	0	0	1	7
6/6/2016	AutoCheck	La Palmera	1:00 PM	4	0	4	0	0	0	0	0	0	4
6/7/2016	AutoCheck	La Palmera	1:00 PM	4	0	4	0	0	0	0	0	0	4
6/10/2016	AutoCheck	CC Trade Center	10:00 AM	5	0	5	0	1	0	0	0	1	4
6/13/2016	AutoCheck	La Palmera	1:00 PM	12	0	12	0	1	0	0	0	1	11
6/14/2016	Autocheck	La Palmera	1:00 PM	21	0	21	4	5	0	0	0	6	15
6/18/2016	Autocheck	CC Trade Center	10:00 AM	9	0	9	0	0	0	0	0	0	9

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
6/20/2016	Autocheck	La Palmera	1:00 PM	11	0	11	1	1	0	0	0	2	9
6/21/2016	AutoCheck	La Palmera	1:00 PM	8	0	8	0	0	0	0	0	0	8
6/27/2016	Autocheck	La Palmera	1:00 PM	5	0	5	0	1	0	0	0	1	4
6/28/2016	Autocheck	La Palmera	1:00 PM	4	1	5	0	0	0	0	0	0	5
7/5/2016	Autocheck	La Palmera	10:00 AM	6	0	6	1	0	0	0	0	1	5
7/8/2016	Autocheck	CC Trade Center	10:00 AM	6	0	6	0	0	0	0	0	0	6
7/12/2016	Autocheck	Whataburger Field	9:00 AM	13	0	13	1	2	0	0	0	2	11
7/19/2016	AutoCheck	Flint Hills	9:00 AM	11	0	11	0	2	0	0	0	2	9
7/20/2016	AUTOCHECK	Flint Hills	9:00 AM	6	0	6	0	0	0	0	0	0	6
7/21/2016	AutoCheck	Flint Hills	9:00 AM	10	0	10	0	0	0	0	0	0	10
7/26/2016	AutoCheck	La Palmera	10:00 AM	7	0	7	0	1	0	0	0	1	6
7/30/2016	AutoCheck	FUMC Health Fair Portland	9:00 AM	19	0	19	0	1	0	0	0	1	18
8/1/2016	Autocheck	La Palmera	1:00 PM	2	0	2	0	0	0	0	0	0	2

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
8/8/2016	AutoCheck	La Palmera	1:00 PM	2	0	2	0	0	0	0	0	0	2
8/15/2016	AutoCheck	La Palmera	1:00 PM	4	0	4	0	0	0	0	0	0	4
8/20/2016	Autocheck	ROY MILLER	10:00 AM	27	0	27	1	2	0	0	0	3	24
8/22/2016	Autocheck	La Palmera	1:00 PM	1	0	1	0	0	0	0	0	0	1
8/26/2016	AUTOCHECK	CC Trade Center	12:00 PM	3	2	5	0	0	0	0	0	0	5
8/29/2016	Autocheck	La Palmera	1:00 PM	1	0	1	0	0	0	0	0	0	1
9/9/2016	Autocheck	CC Trade Center	1:00 PM	2	0	2	0	1	0	0	0	1	1
9/12/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	1	0	1	0	0	0	0	0	0	1
9/19/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
9/24/2016	Autocheck	Del Mar West Campus	10:00 AM	21	0	21	2	1	0	0	0	2	19
9/30/2016	Autocheck	CC Trade Center	1:00 PM	5	0	5	1	1	0	0	0	2	3
10/3/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	5	0	5	0	1	0	0	0	1	4
10/10/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	6	0	6	1	0	0	0	0	1	5

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
10/22/2016	Autocheck	CC Trade Center	10:00 AM	3	0	3	1	0	0	0	0	1	2
10/24/2016	MOTOR MONDAY	TAMU-CC Island Dr.	1:00 PM	4	0	4	0	0	0	0	0	0	4
10/31/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	2	0	2	0	1	0	0	0	1	1
11/7/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
11/9/2016	Autocheck	La Palmera	1:00 PM	1	0	1	0	0	0	0	0	0	1
11/12/2016	Autocheck	CC Trade Center	10:00 AM	17	0	17	2	2	0	0	0	4	13
11/14/2016	MOTOR MONDAY	TAMU-CC Island Dr.	1:00 PM	2	0	2	0	0	0	0	0	0	2
11/16/2016	AUTOCHECK	La Palmera	1:00 PM	20	0	20	1	2	0	0	0	3	17
11/19/2016	Downtown Lions Club-CC	4531 everhart cc	10:00 AM	23	0	23	3	0	0	0	0	3	20
11/21/2016	MOTOR MONDAY	TAMU-CC Island Dr.	1:00 PM	10	0	10	0	0	0	0	0	0	10
11/22/2016	Autocheck	Ortiz center	10:00 AM	6	0	6	0	0	0	0	0	0	6
11/28/2016	MOTOR MONDAY	TAMU-CC Island Dr.	1:00 PM	15	0	15	0	1	0	0	0	1	14

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
11/30/2016	AutoCheck	La Palmera	1:00 PM	45	0	45	3	9	0	0	0	13	32
12/5/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	1	0	1	1	1	0	0	0	1	0
12/12/2016	Motor Monday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
12/14/2016	annual inspection	Port of Corpus Christi	9:00 AM	0	102	102	0	0	0	6	0	6	96
12/17/2016	Auto Check	CC Trade Center	10:00 AM	5	0	5	0	1	0	0	0	1	4
12/19/2016	MOTOR MONDAY	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
1/9/2017	AUTOCHECK	Agua Dulce Head Start	1:00 PM	6	0	6	0	0	0	0	0	0	6
1/21/2017	Autocheck	McDonald Public Library	10:00 AM	14	0	14	2	2	0	0	0	3	11
1/25/2017	Smog Away Wednesday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	1	0	0	0	1	2
2/1/2017	Smog Away Wednesday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
2/8/2017	Smog-away Wednesday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
2/9/2017	Autocheck	EL Tejanito Head Start	1:30 PM	10	0	10	2	2	0	0	0	2	8

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
2/11/2017	AUTOCHECK	CC Trade Center	10:00 AM	3	0	3	1	0	0	0	0	1	2
2/15/2017	Smog-away Wednesday	TAMU-CC Island Dr.	1:00 PM	4	0	4	0	2	0	0	0	2	2
2/22/2017	Smog away Wednesday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
2/25/2017	Autocheck	CC Trade Center	10:00 AM	3	0	3	0	0	0	0	0	0	3
3/1/2017	Smog away Wednesday	TAMU-CC Island Dr.	1:00 PM	4	0	4	0	1	0	0	0	1	3
3/6/2017	Autocheck	La Palmera	1:00 PM	5	0	5	0	1	0	0	0	1	4
3/22/2017	Autocheck	La Palmera	1:00 PM	2	0	2	0	0	0	0	0	0	2
3/27/2017	AUTOCHECK	La Palmera	1:00 PM	2	0	2	0	1	0	0	0	1	1
4/3/2017	Motor Monday	TAMU-CC Island Dr.	1:00 PM	2	0	2	0	1	0	0	0	1	1
4/8/2017	Earth Day Bay Day	Earth Day-Heritage Park	10:00 AM	10	0	10	0	0	0	0	0	0	10
4/12/2017	Smog-Away Wednesday	TAMU-CC Island Dr.	1:00 PM	3	0	3	0	0	0	0	0	0	3
4/17/2017	Motor Monday	TAMU-CC Island Dr.	1:00 PM	2	0	2	0	0	0	0	0	0	2

Event Information				Vehicle Count			Voucher Issues		Fleet Issues			Vehicles	
Event Date	Event Name	Location	Time	Private	Fleet	Total	Gas Cap	Repairs	Gas Cap	Tailpipe	DTC	Dirty	Clean
4/22/2017	Autocheck	CC Trade Center	10:00 AM	1	0	1	0	0	0	0	0	0	1
4/24/2017	Motor Monday	TAMU-CC Island Dr.	1:00 PM	1	0	1	0	0	0	0	0	0	1

Totals				Total Vehicle Count			Total Voucher Issues		Total Fleet Issues			Vehicles	
Events				Private	Fleet	Total	Gas Caps	Repairs	Gas Caps	Repairs	"Dirty"	"Clean"	
76				530	119	649	31	51	0	6	82	567	

ATTACHMENT F

**CLEAN FLEET EMISSIONS REDUCTIONS
DATA**

Repair Count

Voucher Redeemed Gas Caps

Invoice Date	VoucherID
6/9/2016	232
6/9/2016	568
7/5/2016	219
7/7/2016	489
8/22/2016	565
9/14/2016	485
9/14/2016	583
9/19/2016	413
9/19/2016	416
10/11/2016	0426
11/18/2016	403
12/1/2016	415
12/28/2016	285
1/9/2017	421
3/13/2017	225
3/13/2017	564

Gas Cap Count

HC Reductions lbs/yr

Annual Reductions lbs/yr

HC	NOx	CO
14139.62	309.35	16565.32

HC Includes Gas Caps

ATTACHMENT G

POLLUTION PREVENTION PARTNERSHIP EDUCATION/OUTREACH SUMMARY



Meetings

Thursday, April 27, 2017

11:59:17 AM

Date	Time	Location	Group or Event	Topic	Presentation	Attendance
6/23/2016	12:00:00 PM	B and J Pizza, Corpus Christi, Tx	Nueces County Safe Communities Coalition	Ozone pollution prevention strategies for individuals and organizations.	Safe Communities Presentation ozone.pptx	4
7/21/2016	2:00:00 PM	Port of Corpus Christi Administration Building - 222 Power St. Corpus Christi, TX	Corpus Christi Air Quality Group	2016 Ozone Season Update Update on Implementation of EPA 2015 NAAQS for Ozone Ozone Advance Review Described Pollution Prevention Partnership and AutoCheck to group and guest educators.	informal verbal	22
7/30/2016	10:00:00 AM	First United Methodis Church Portland, TX	FUMC 3rd Annual Community Health Fair	Ozone Health effects and prevention. Distributed child and adult educational information. Promoted AutoCheck screening.	information booth tabletop diplay and verbal	118
8/10/2016	1:30:00 PM	Solomon Coles High School 924 Winnebago St. Corpus Christi, Tx 78401	LEAD First Health Fair Meeting	Vendor organization and introductions for the upcoming health fair. Location planning for AutoCheck Screening location during the fair.	informal verbal	10
8/20/2016	10:00:00 AM	Roy Miller High School	LEAD First Foundation and Superior HealthPlan health fair	Ozone Health effects and prevention. Distributed child and adult educational information. Promoted AutoCheck screening. 1300 families came by the booth and recieved English and Spanish children's activities books about ozone prevention.	Information booth tabletop diplay and verbal	3000

Date	Time	Location	Group or Event	Topic	Presentation	Attendance
9/25/2016	10:00:00 AM	Del mar College West Campus	8th Annual City Wide Health Fair	Ozone Health effects and prevention. Distributed child and adult educational information. Promoted AutoCheck screening.	oral	153
9/27/2016	8:00:00 AM	Del Mar College Center For Economic Development	Transportation Tuesday Quarterly Metting for the CC Regional Transportation Authority	Legislative overview of broad regional transportation issues including, pollution. Attended for networking and Information.	None	150
10/28/2016	11:30:00 AM	101 South Padre Island Drive & Bear Lane	Nueces County Community Action Agency-Health Advisory Meeting	Ozone pollution prevention strategies, AutoCheck and SmartWay Partnership promotion.	Nueces County Community Action Agency Presentation ozone.pptx	38
10/28/2016	2:00:00 PM	Port of Corpus Christi admin. bldg.	Corpus Christi Air Quality Group	SmartWay Partner Promotion	oral	16
11/14/2016	4:00:00 PM	Amistad Community Health Center - World Diabetes Awarness Day	Healthy SouthTexas	Ozone health concerns, pollution prevention and AutoCheck	Oral	83
11/22/2016	9:00:00 AM	Ortiz Center	Nueces County Community Action Agency Health Expo	Ozone Prevention and AutoCheck Promotion Direct Discussions	Oral	30
1/3/2017	8:00:00 AM	TAMUCC University Center Anchor Ballroom	CC Regional Transportation Authority -Policy Meeting	SmartWay Partnership affiliate promotion- Awareness for sustainable freight chains and emissions reduction.	P3-SmartWay.pptx	
1/9/2017	1:30:00 PM	1513 Second st. , Agua Dulce, Tx	Agua Dulce Head Start Parents Meeting	Ozone prevention, Health, auto maintenance and fuel economy	oral and demonstration of equipment	3

Date	Time	Location	Group or Event	Topic	Presentation	Attendance
1/10/2017	3:00:00 AM	Port Administration Building	Corpus Christi Air Quality Group	Discussion of ozone reduction strategic planning and community action plans. Received status of air monitoring systems. No presentation given.		18
2/2/2017	8:30:00 AM	Solomon Ortiz Center	Texas-Freight Advisory Committee Regional Workshop	Identifying freight system designation areas. In Breakout session advised on improving last mile queing areas to reduce idle times at bottlenecks reducing NOx. Include seasonal high traffic times in designation metrics for proper weight of metric.		
2/9/2017	2:00:00 PM	4768 Old Brownsville Rd.	El Tejanito Head Start Parents Meeting	Ozone action, Emissions reduction	Oral presentation	22
2/10/2017	11:30:00 AM	Nueces County Community Action Agency, 101 S. Padre Island Drive	Quarterly Health Advisory Board Meeting	Ozone Action Reminder, invitation for presentation opportunities and promotion of AutoCheck events.	Oral Presentation	56
2/28/2017	10:00:00 AM	Roy F. Moody High School	Girls in Engineering Math and Science Conference	Ozone reduction, health effects of ozone, equipment demonstrations and Autocheck promotion	Oral presentations	63
4/7/2017	2:00:00 AM	Port Administration Building	Corpus Christi Air Quality Group	Introduced Mower Exchange and Electric Mower sharing Plans		18
4/8/2017	10:00:00 AM	Heritage Park	Earth Day Bay Day	Ozone education and prevention. Promotion of AutoCheck	Oral presentations to attendees	162

Date	Time	Location	Group or Event	Topic	Presentation	Attendance
4/11/2017	10:00:00 AM	Foy H. Moody High School	Men 4 S.T.E.M. Jr. High School	Environmental Engineering promotion. Health effects of ozone. Ozone reduction education, awareness, technologies and demonstrations.	Oral presentations to small groups	72
4/26/2017	2:30:00 AM	John F. Kennedy Elementary School	Head Start Parent's Meeting	Oral presentation and equipment demonstration. Ozone season, pollution reduction strategies, health effects of ozone. AutoCheck Promotion.		11
22	Meetings and Informational Events			Networking and Informational Contacts		4049

ATTACHMENT H

**EMISSION REDUCTION RESPONSE SHEETS
AND LETTERS**

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

May 2016 – April 2017

Communications:

- ✓ 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy!
<http://www.enviroflash.info/signup.cfm>
- Communicate elevated ozone forecasts to employees, vendors and contractors.
 - Include emission reduction policies or recommendations in communications.
- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
 - Provide flexible work schedules or compressed work weeks to take vehicles off the road during peak times.
 - Participate in the RTA Van Pool program. RTA will provide a van for employee commutes. Fees are dependent upon service area. More information can be found at <https://www.ccrta.org/rider-info/programs/> or calling 1-800-VAN-SHARE.
- Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre -scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

- ✓ Have an anti-idle policy for all contractor and delivery vehicles
- Postpone non-essential deliveries on elevated ozone days
- ✓ Require painters to use low VOC paints
- Require grounds crews to postpone operations on elevated ozone days
- ✓ Require vendors and contractors to use low VOC solvents
- ✓ Require vendors and contractors to use low VOC 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
- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
- Encourage employees to have their vehicle emissions tested. Host a testing day on your site. Call AutoCheck at 825-3070
- Replace older units in fleet
- Repower or replace older engines in fleet
- Have an anti-idle policy for your fleet
- Install filter traps and DOCs on your diesel fleet
- Perform diesel retrofits
- Use low sulfur diesel fuel for your diesel fleet
- Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- Utilization of IR cameras to detect and repair fugitive emissions
- Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- Installation of low NOx burners on heaters
- Use of low NOx water heaters
- Use of flue gas recirculation
- Use of vapor recovery or incineration
- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: Kiewit Offshore Services

Address: 2440 Kiewit road, Ingleside, Tx 78362

Gretchen

From: Diaz, Alfredo <Alfredo.Diaz@fhr.com>
Sent: Thursday, April 6, 2017 1:44 PM
To: Gretchen
Subject: RE: ozone advance input

Gretchen:

Please find Flint Hills Resources Corpus Christi, LLC ("FHR") list of voluntary projects or initiatives that FHR has undertaken to be included in the ozone report.

1. Maintained flaring events at a refinery to a level far below industry norms through flare management practices.
2. A program is in place to send elevated Ozone Day notification pages to employees.
3. Compressed work schedules (9/80 or 4 day work week) were made available for some employees and contractors.
4. Infrared cameras were used to aid in leak detection.
5. Low emitting floating roofs were installed on targeted tanks.
6. Refinery process connectors were voluntarily tagged and have been included in voluntary annual emissions monitoring above that required by LDAR regulations.
7. On-going mechanical Integrity program in place to reduce Heat Exchanger VOC leaks to Cooling Towers.
8. Installation of heater NOX controls.

If there are questions regarding this information, please do not hesitate to contact me.

Sincerely,

Alfredo Diaz

Lead Environmental Engineer
Flint Hills Resources Corpus Christi, LLC
(361) 242-4889

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

May 2016 – April 2017

Communications:

- 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy!
<http://www.enviroflash.info/signup.cfm>
- Communicate elevated ozone forecasts to employees, vendors and contractors.
 - Include emission reduction policies or recommendations in communications.
- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
 - Provide flexible work schedules or compressed work weeks to take vehicles off the road during peak times.
 - Participate in the RTA Van Pool program. RTA will provide a van for employee commutes. Fees are dependent upon service area. More information can be found at <https://www.ccrta.org/rider-info/programs/> or calling 1-800-VAN-SHARE.
- Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre -scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

- Have an anti-idle policy for all contractor and delivery vehicles
- Postpone non-essential deliveries on elevated ozone days
- Require painters to use low VOC paints
- Require grounds crews to postpone operations on elevated ozone days
- Require vendors and contractors to use low VOC solvents
- Require vendors and contractors to use low VOC 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
- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
- Encourage employees to have their vehicle emissions tested. Host a testing day on your site. Call AutoCheck at 825-3070
- Replace older units in fleet
- Repower or replace older engines in fleet
- Have an anti-idle policy for your fleet
- Install filter traps and DOCs on your diesel fleet
- Perform diesel retrofits
- Use low sulfur diesel fuel for your diesel fleet
- Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.
- Provide bicycles inside facility for transportation purposes.

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- Utilization of IR cameras to detect and repair fugitive emissions
- Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- Installation of low NOx burners on heaters
- Use of low NOx water heaters
- Use of flue gas recirculation
- Use of vapor recovery or incineration
- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: Valero Corpus Christi Refineries

Address: 1147 Cantwell Lane

Corpus Christi, TX 78407

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May 2016 – April 2017

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- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: __CITGO Corpus Christi Refinery__

Address: 1801 Nueces Bay Blvd

Gretchen

From: Kenall, Kevin <KKenall@citgo.com>
Sent: Tuesday, March 28, 2017 2:13 PM
To: Gretchen (gretchen.arnold@stx.rr.com)
Subject: emissionstips2017.docx
Attachments: emissionstips2017.docx

Year around, we use thermal oxidizers, carbon canisters, and scrubbers to minimize VOC emissions when preparing tanks for maintenance.

We also take the following specific actions on Ozone days.

- Shutdown all Non-Essential Welding
- Shutdown all Non-Essential Air Compressors
- Stop Construction Projects
- Stop Tank Maintenance
- Stop all Painting and Sandblasting
- Shutdown Gas Pump
- Reschedule Uncontrolled Loading Activities until Evening or Another Day
- Stop all Non-Essential Maintenance, e.g. Cherry Pickers
- Stop Grass Mowing

If you have any questions or need any other additional information, please let me know.

Kevin

March 29, 2017

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

Re: **Equistar Chemicals, LP – Corpus Christi Complex
Ozone Advance Program
Voluntary Air Emission Reduction Examples**

Dear Ms. Arnold:

Equistar Chemicals, LP – Corpus Christi Complex (Equistar) continues to support the efforts of the Ozone Advance Program and the Coastal Bend Regional Air Quality Committee to maintain attainment with the 8-hour ozone standard for the Corpus Christi Urban Airshed. As part of our commitment, Equistar has implemented voluntary emission-reduction projects as described below.

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:

- Flare reduction/minimization program
- Utilization of IR cameras for inspections
- Routine inspections for 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

Maintenance Activities:

- Delay painting when possible and to delay lawn mowing
- Avoid use of diesel air compressors when possible;
- Reduce the use of engine driven equipment as possible;
- Limit refueling of plant vehicles between 6:00 AM and 2:00 PM if 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

Once again, Equistar remains committed to reduce environmental emissions and maintain compliance with the eight-hour ozone standard.

Sincerely,

A handwritten signature in black ink, appearing to read "Randal E. Tatum". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Randal E. Tatum
Site Manager



April 19, 2017

Ms. Gretchen Arnold
Chair, Corpus Christi Air Quality Committee
121 Atlantic Street
Corpus Christi, TX 78404

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

Dear Ms. Arnold:

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

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

- Promote Ozone Action Day awareness by notifying South Texas employees of the 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,
- Participate in the Corpus Christi Air Quality Committee and,
- Support local environmental awareness events such as Earth Day Bay Day.

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

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

Communications:

- ✕ 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✕ Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy!
<http://www.enviroflash.info/signup.cfm>
- ✕ Communicate elevated ozone forecasts to employees, vendors and contractors.
 - Include emission reduction policies or recommendations in communications.
- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
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- Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre -scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

- Have an anti-idle policy for all contractor and delivery vehicles
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- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
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- Use of flue gas recirculation
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- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: Tebas A&M University Corpus Christi

Address: 6300 Ocean Dr. Unit 5876
Corpus Christi, Tx, 78412

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS May 2016 – April 2017

Communications:

- ✓ 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy!
<http://www.enviroflash.info/signup.cfm>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors. (Forecasts are also communicated to Port Authority Tenants.)
 - ✓ Include emission reduction policies or recommendations in communications.
- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
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- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

- Have an anti-idle policy for all contractor and delivery vehicles
- Postpone non-essential deliveries on elevated ozone days
- ✓ Require painters to use low VOC paints
- ✓ Require grounds crews to postpone operations on elevated ozone days
- ✓ Require vendors and contractors to use low VOC solvents
- ✓ Require vendors and contractors to use low VOC 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
- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- ✓ Include alternative fueled (propane, CNG) vehicles in your fleet
- ✓ Emissions test your fleet and keep fleet in well maintained state
- ✓ Encourage employees to have their vehicle emissions tested. Host a testing day on your site. Call AutoCheck at 825-3070
- ✓ Replace older units in fleet
- ✓ Repower or replace older engines in fleet
- ✓ Have an anti-idle policy for your fleet
- Install filter traps and DOCs on your diesel fleet
- Perform diesel retrofits
- ✓ Use low sulfur diesel fuel for your diesel fleet
- Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- Utilization of IR cameras to detect and repair fugitive emissions
- Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- Installation of low NOx burners on heaters
- Use of low NOx water heaters
- Use of flue gas recirculation
- Use of vapor recovery or incineration
- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- ✓ Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- ✓ Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: Port of Corpus Christi Authority

Address: 222 Power Street

Corpus Christi, Texas 78401

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

May 2016 – April 2017

Communications:

- ✓ 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy!
<http://www.enviroflash.info/signup.cfm>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors.
 - ✓ Include emission reduction policies or recommendations in communications.
- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
 - Provide flexible work schedules or compressed work weeks to take vehicles off the road during peak times.
 - Participate in the RTA Van Pool program. RTA will provide a van for employee commutes. Fees are dependent upon service area. More information can be found at <https://www.ccrta.org/rider-info/programs/> or calling 1-800-VAN-SHARE.
- ✓ Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre -scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

- ✓ Have an anti-idle policy for all contractor and delivery vehicles
- Postpone non-essential deliveries on elevated ozone days
- ✓ Require painters to use low VOC paints
- ✓ Require grounds crews to postpone operations on elevated ozone days
- ✓ Require vendors and contractors to use low VOC solvents
- ✓ Require vendors and contractors to use low VOC 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
- ✓ Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- ✓ Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
- Encourage employees to have their vehicle emissions tested. Host a testing day on your site. Call AutoCheck at 825-3070
- Replace older units in fleet
- Repower or replace older engines in fleet
- Have an anti-idle policy for your fleet
- Install filter traps and DOCs on your diesel fleet
- Perform diesel retrofits
- Use low sulfur diesel fuel for your diesel fleet
- Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.
- Use electric golf carts for in-plant transportation (versus gas-powered).

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- Utilization of IR cameras to detect and repair fugitive emissions
- Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- Installation of low NOx burners on heaters
- Use of low NOx water heaters
- Use of flue gas recirculation
- Use of vapor recovery or incineration
- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: OCCIDENTAL CHEMICAL CORP. - INGLESIDE FACILITY

PHYSICAL
Address:

4133 HWY 361, GREGORY, TX 78359

MAILING
ADDRESS:

P.O. BOX CC, INGLESIDE, TX 78362

County of Nueces

Department of Public Works

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



Glen R. Sullivan, P.E.

Director of Public Works
Nueces County Engineer

March 28, 2017

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

Re: Nueces County Public Works Ozone Emissions Reduction Voluntary Measures-May 1, 2016-March 24,2017

Dear Ms. Arnold:

In response to your request for a summary of our voluntary ozone associated pollutant reductions measures, we summarized Nueces County's progress in reducing ozone emissions. Ozone (NOx and VOCs) reduction measures are for activities and operations conducted between May 1, 2016, through March 24, 2017.

The Department of Public Works maintains a fleet of vehicles and equipment used in routine maintenance of roads and bridges in the un-incorporated areas of Nueces County. Nueces County has about 50 buildings of which the largest have been retrofitted with devices and have programmed measures to save energy.

All of our energy reduction measures regarding personnel activities, behavior and practice, are voluntary.

Communications & Training:

Senior staff keeps track of media broadcasts associated with elevated ozone forecasts, which in turn are communicated to field supervisors and foremen. All employees, vendors and contractors are encouraged to voluntarily conduct activities that provide emission reductions, without compromising safety, work output quality or schedules that allow compliance with State Regulations as well as mandatory Jail Standards.

- (i). Employees are encouraged to car pool, particularly on elevated ozone days – even for lunch.
- (ii). Employees are encouraged to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days.
- (iii). Exempt employees have liberty to dress casual.
- (iv). Employees are encouraged to take advantage of the RTA van pool program as far as practicable.
- (v). Pool cars are provided designated parking spots.
- (vi). Informal ozone education is imparted during routine interaction between senior staff, foremen, supervisors and employees.

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 (for public safety reasons they are not postponed) 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

Fleet

- (i). We have alternative fueled (propane, CNG) vehicles in our fleet.
- (ii). Emissions test our fleet and keep fleet in well maintained state.
- (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 as needed.
- (vii). Use low sulfur diesel fuel for our diesel fleet.

Equipment

- (i). All boilers operate on natural gas fuel with low NOx burners.
- (ii). Boilers and heaters are under scheduled maintenance to reduce ozone associated emissions.
- (iii). All of the HVAC chilled water systems (chillers, condensers, evaporators, cooling towers, AHUs, VAVs et al) located at the Courthouse and Jail, Juvenile Detention, and MckInzie Annex have been retrofitted with Energy Savings Controls like VFDs, Network Integration Engines, Field Controllers, gauges, sensors, transmitters, capacitor banks, water conservation measures, solar water heaters, solar photovoltaic electricity generators, a wind turbine and a solar array at Central garage, all towards conservation of energy which augments reduction of ozone related emissions from the point source (Electricity Generation Power Station). This was done in 2 phases under the State of Texas –State Energy Conservation Office recommended engineered equipment utility cost reduction measures (UCRMs), at a cost of about \$ 18 million. Energy efficiency has resulted in significant energy savings and emissions reductions especially of ozone associated contaminants.
- (iv). All of the HVAC and other equipment is maintained under a rigorous scheduled maintenance program.
- (vii). All lights in office areas are automatically turned on and off as sensed by infra red and photo sensors.
- (viii). Third party verified measurement of conservation savings shows reduction in actual consumption for water, gas and electricity, in a range between 20 to 25 %, which should proportionally reduce emissions from the Power Generation point source from reduced demand.

If you have any questions, please contact me or Dipak V. Desai, P.E., Principal Engineer.

Sincerely,



Glen R. Sullivan, P.E.
Director of Public Works

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

May 2016 – April 2017

Communications:

- ✓ 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:
<https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- ✓ Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy!
<http://www.enviroflash.info/signup.cfm>
- ✓ Communicate elevated ozone forecasts to employees, vendors and contractors.
 - ✓ Include emission reduction policies or recommendations in communications.
- Look in to your work place being a "Best Work Place For Commuters". More about the program can be found at <http://www.bestworkplaces.org>
 - Provide a ride-match program. Encourage employees to car pool – even if it's just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
 - Provide flexible work schedules or compressed work weeks to take vehicles off the road during peak times.
 - Participate in the RTA Van Pool program. RTA will provide a van for employee commutes. Fees are dependent upon service area. More information can be found at <https://www.ccrta.org/rider-info/programs/> or calling 1-800-VAN-SHARE.
- ✓ Provide ozone education and emissions reductions tips in your routine employee training
- ✓ Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre-scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Will be encouraged to in a future newsletter to employees.

Contractors and Vendors

- Have an anti-idle policy for all contractor and delivery vehicles
- Postpone non-essential deliveries on elevated ozone days
- ✓ Require painters to use low VOC paints
- ✓ Require grounds crews to postpone operations on elevated ozone days
- Require vendors and contractors to use low VOC solvents
- Require vendors and contractors to use low VOC 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
- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Will discuss with management

Fleet

Looking into this

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
- Encourage employees to have their vehicle emissions tested. Host a testing day on your site. Call AutoCheck at 825-3070
- Replace older units in fleet
- Repower or replace older engines in fleet
- Have an anti-idle policy for your fleet
- Install filter traps and DOCs on your diesel fleet
- Perform diesel retrofits
- ✓ Use low sulfur diesel fuel for your diesel fleet
- ○ Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- ✓ Utilization of IR cameras to detect and repair fugitive emissions
- ✓ Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- ✓ Installation of low NOx burners on heaters
- Use of low NOx water heaters
- ✓ Use of flue gas recirculation
- ✓ Use of vapor recovery or incineration
- ✓ Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- ✓ Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- ✓ Set thermostats to a comfortable but efficient level
- ✓ Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: voestalpine Texas LLC

Address: 2800 Kay Bailey Hutchison Road

Portland, TX 78374-7400

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

May 2016 – April 2017

Communications:

- 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: <https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new>
- Register with AirNow to receive daily emails or texts for ozone action days. It is free and easy! <http://www.enviroflash.info/signup.cfm>
- Communicate elevated ozone forecasts to employees, vendors and contractors.
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- Look in to your work place being a “Best Work Place For Commuters”. More about the program can be found at <http://www.bestworkplaces.org>
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- Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre-scripted messages, tweets and more can be emailed to you to copy and send along. Gretchen.arnold@stx.rr.com
- Fly air quality flags at the company work site. More about obtaining flags can be found at www.airnow.gov/flag

Contractors and Vendors

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- Require vendors and contractors to use scrubbers on VOC chemical extraction processes
- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
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- Flare reduction program
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- Production of low Reid vapor pressure gasoline
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- Installation of low NOx burners on boilers
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- Use of flue gas recirculation
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- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: _____ City of Corpus Christi

Address: _____ 1201 Leopard St. _____

_____ Corpus Christi, Texas _____

CORPUS CHRISTI OZONE SEASON AIR EMISSION REDUCTION PROJECTS

May 2016 – April 2017

Communications:

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 - Provide a ride-match program. Encourage employees to car pool – even if it’s just for lunch. Preferred parking could be all the incentive they need!
 - Encourage employees to use alternative modes of transportation (bus, bike, walk). Casual dress allowance is a great and free incentive.
 - Encourage employees to telecommute. Studies show it increases moral and workers are just as productive.
 - Encourage teleconferencing instead of wasted time and added air emissions driving to meetings.
 - Provide flexible work schedules or compressed work weeks to take vehicles off the road during peak times.
 - Participate in the RTA Van Pool program. RTA will provide a van for employee commutes. Fees are dependent upon service area. More information can be found at <https://www.ccrta.org/rider-info/programs/> or calling 1-800-VAN-SHARE.
- Provide ozone education and emissions reductions tips in your routine employee training
- Have emission reduction tips and recommendations posted in your workplace lobby, elevators and computer screensavers. Pre-scripted messages, tweets and more can be emailed to you to copy and send along.
Gretchen.arnold@stx.rr.com
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Contractors and Vendors

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- Give preference to vendors (maintenance, construction, landscaping) that use low emissions equipment
- Give preference to vendors that use low emissions products

Fleet

- Include alternative fueled (propane, CNG) vehicles in your fleet
- Emissions test your fleet and keep fleet in well maintained state
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- Perform diesel retrofits
- Use low sulfur diesel fuel for your diesel fleet
- Require inside fence-line transportation to be shuttle or bicycle
- Join the SmartWay program if you work with shipping via truck, rail, ship or air deliveries. More can be found at www.epa.gov/smartway Call Trent Thigpen with Pollution Prevention Partnership at 361-825-3070 for more information.
- Car Pooling

Operations

- Flare reduction program
- Production of low sulfur diesel
- Production of low Reid vapor pressure gasoline
- Utilization of IR cameras to detect and repair fugitive emissions
- Perform routine inspections for leaks and fugitive emissions

Equipment

- Installation of low NOx burners on boilers
- Installation of low NOx burners on heaters
- Use of low NOx water heaters
- Use of flue gas recirculation
- Use of vapor recovery or incineration
- Installation of scrubbers
- Installation of additional seals and liners on storage tanks
- Continuous and routine inspection of storage tanks for fugitive emissions

Energy Efficiency

- Encourage employees to turn off lights in rooms that are not in use.
- Set office and field equipment in low power mode when possible
- Repair poor seals around windows
- Set thermostats to a comfortable but efficient level
- Look into [www.http://www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Company Name: M&G Resins USA, LLC

Address: 7001 Joe Fulton International Corridor, Corpus Christi, Texas 78409