



GC SWLA

A Green Coalition for Southwest Louisiana



The Path Forward Action Plan

An Action Plan to Reduce Area Ozone Pollution
and Particulate Matter in the Lake Charles MSA
(Calcasieu/Cameron Parishes)

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Created by the Southwest Louisiana Air Quality Task Force



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Limit Your Driving
Drive Emission Wise
Refuel Carefully
Maintain Your Vehicle
Live Emissions Wise
Delay or Reschedule Lawn care
Postpone Oil-Based Paint and Solvent Use
Barbecue with Electric or Chimney Starters
Conserve Energy in Your Home
Spread the Word

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ATTACHMENT I

ATTACHMENT II

Members of Our Coalition Include:

ATTACHMENT III

Members of Lake Area Industry Alliance (LAIA)

List of Frequently Used Acronyms

8-Hour Ozone Flex Program

APU: Auxiliary Power Units

AQTF: Air Quality Task Force

CAA: Clean Air Act

CFC: Chlorofluorocarbon

CO₂: Carbon Dioxide

EPA: U. S. Environmental Protection Agency

IMCAL/MPO: Imperial Calcasieu Regional Planning & Development Commission and Lake Charles Area Metropolitan Planning Organization

LAIA: Lake Area Industry Alliance

LDEQ: Louisiana Department of Environmental Quality

LDOTD: Louisiana Department of Transportation and Development

MOA: Memorandum of Agreement

MSA: Calcasieu-Cameron Parishes Metropolitan Statistical Area

NAAQS: National Ambient Air Quality Standards

NECO: Neighborhood Eco Pass

NMOG: Non-Methane Organic gases NO_x: oxides of nitrogen

O₃: Ozone

ppb: parts per billion

ppm: parts per million

RVP: Reid Vapor Pressure

SWLA: Southwest Louisiana

tpd: tons per day

tpy: tons per year

VMEP: Voluntary Mobile Source Emission Reduction Program

VMT: Vehicle Miles Traveled

VOC: volatile organic compounds

Advance Program: Air Quality 101 and History

What is the Advance Program?

The Advance Program is a collaborative effort by the U.S. Environmental Protection Agency (EPA), states, tribes, and local governments to encourage emission reductions in attainment areas, to help them continue to meet the National Ambient Air Quality Standards (NAAQS) for ozone and fine particles (PM_{2.5}). Attainment areas are those areas that are currently designated as meeting the NAAQS. Through the Advance Program, states, tribes, and local governments work with EPA to take near-term steps to improve local air quality and ensure continued health protection over the long term. Their efforts will reduce air pollution and could provide an enhanced buffer against future air quality violations.

Ozone Advance began in April 2012 and focused on maintaining the ozone standards, while PM Advance started in January 2013 and emphasized maintenance of the PM_{2.5} standards. Areas that join both Ozone and PM Advance are interested in pursuing multi-pollutant reductions.

The Advance Program is flexible in the sense that participants determine their own goals and the measures they want to implement to reach them. Although there are no guarantees that participation will prevent a nonattainment designation from ever occurring, the actions taken as part of Advance could better position an area to handle nonattainment requirements if they ever do apply.

Why Are Early Efforts to Reduce Ozone/PM_{2.5} Important?

It makes sense to take local steps to reduce air pollution voluntarily before pursuing reductions becomes a requirement:

- Further improving air quality in attainment areas can *help to ensure continued health protection*.
- Proactive efforts to improve air quality could *better position some areas to stay in attainment*. Alternatively, if an area is eventually designated nonattainment, these efforts could either:
 1. provide needed reductions that could result in a lower classification and
 2. feed into a future State Implementation Plan (SIP).
- Reductions targeting one pollutant often result in *multi-pollutant co-benefits*.
- Areas working voluntarily to reduce air pollution have *more flexibility* to choose measures that make sense to them; once a nonattainment designation has occurred, less flexibility is available.

What is Ozone?

Ground Level Ozone: Ozone is not emitted directly into the air, but forms through the reaction of nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight.

Elevated ozone levels typically occur during the summer months.

- Ozone: “Good up high, bad nearby.”
- In the stratosphere, ozone occurs naturally and screens out harmful ultraviolet rays from the sun.

- Ground-level ozone results from photochemical reaction of nitrogen oxides (NO_x) and volatile organic compounds (VOCs) while in the presence of sunlight.
- At ground-level, ozone is a principal component of smog and one of six “criteria pollutants” for which EPA has set national ambient air quality standards (NAAQS).

What You Need to Know About Ozone and Your Health:

- **Ozone can**

- Irritate the respiratory system
- Reduce lung function
- Aggravate asthma
- Aggravate chronic lung diseases, such as emphysema and bronchitis
- Inflammate and temporarily damage the lining of the lung
- Impair the body’s immune system defenses

- **Who is sensitive to Ozone?**

- Children
- Adults who are active in the outdoors
- People with respiratory diseases
- People with unusual susceptibility to ozone

- **What is Particulate Matter (PM)?**

- The term Particulate Matter (PM) includes both solid particles and liquid droplets found in the air. Many human-made and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. These solid and liquid particles come in a wide range of sizes. Particles less than 10 micrometers in diameter tend to pose the most significant health concern because they can be inhaled into and accumulate in the respiratory system.

What You Need to Know About Ozone and Your Health:

PM can...

- Premature death in people with heart or lung disease
- Nonfatal heart attacks
- Irregular heartbeat
- Aggravated asthma
- Decreased lung function
- Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.

▪ Who is sensitive to PM?

- People with heart or lung diseases
- Children
- Older adults

▪ What is Particulate Matter (PM)?

- Particles can be carried over long distances by wind and then settle on ground or water.
- Making lakes and streams acidic
- Changing the nutrient balance in coastal waters and large river basins
- Depleting the nutrients in soil
- Damaging sensitive forest and farm crops
- Affecting the diversity of ecosystems
- Contributing to acid rain effects

Introduction

On April 4, 2012, EPA's Office of Air Quality Planning and Standards announced their new voluntary Ozone Advance Program. It continues and expands EPA's cooperative work with state, tribal, and local governments. The Program is patterned after earlier ozone mitigation programs such as Ozone Flex and Early Action Compacts, although divorced from ozone attainment regulatory requirements altogether. The overarching objective of the Ozone Advance Program is to encourage emission reductions in ozone attainment areas to help them to continue to meet the NAAQS. Program goals designed to help achieve the objective are:

1. Help attainment areas to ensure continued attainment of the ozone standard and health protection;
2. Better regions that will remain in achievement; and
3. Efficiently direct available resources toward actions to address ozone problems quickly.

It is believed that participating in the program would facilitate the area's efforts to achieve and maintain the ozone standard as well as provide for possible mitigation of consequences of failure to attain the standard.

On June 25, 2012, IMCAL prepared a letter with the Notice of Intent and requested to be accepted into the EPA's Ozone Advance Program. On July 13, 2012, IMCAL received a letter from EPA indicating that the Lake Charles MSA area met the eligibility criteria and was welcomed as a participant in this innovative program. See Attachment I for a map of the city.

In the summer of 2012, numerous air monitors ranging from Vinton, Carlyss, and Westlake reported levels of ozone or "smog" below, but close to the NAAQS. Southwest Louisiana (SWLA) is designated as an "Attainment Area," but the Louisiana Department of Environmental Quality has recommended that SWLA local government agencies reduce emissions to continue "Attainment" and not obtain "Non-Attainment" status by participating in the EPA Ozone Advance Program.

EPA announced the Particulate Matter Program in January 2013. The Ozone and the Particulate Matter Programs then joined and became the Advance Program. Since being approved into the EPA Advance Program, local government agencies in Southwest Louisiana created an Air Quality Task Force and charged it in developing a short and long-term plan of measures aimed at reducing ozone pollution in its Metropolitan Statistical Area (MSA), which includes Calcasieu and Cameron Parishes. This plan represents the collaborative effort of a group of governmental bodies and non-profit organizations dedicated to improving the air quality in several parishes including the villages, cities, and towns of Vinton, Sulphur, Westlake, Lake Charles, Cameron, Grand Chenier, and Iowa.

Participation in the Advance Program entails:

- Using best efforts to move quickly toward implementing measures that might reduce ozone levels and increase public awareness;

- Develop a plan (“path forward”) within a year of sign up;
 - Implement forward path measures as soon as possible;
 - Annual informal status check-ins.
- The Lake Charles MSA area might benefit from participating in the Program through:
 - Enhanced ozone attainment efforts and a higher probability for maintaining the NAAQS for ozone and PM_{2.5};
 - EPA assistance;
 - A rallying vehicle for public/stakeholder awareness and involvement;
 - Recognition of the area’s efforts to maintain and achieve ozone attainment;
 - Preference for the Diesel Emission Reduction Act program funding.

Who We Are?

The metropolitan planning and economic development organizations, local governments, state environmental agencies, businesses, industries, educational institution, and other community collaborators are working in partnership with the Louisiana Department of Environmental Quality (LDEQ) to improve air quality in the Lake Charles MSA area. This coalition is called the Air Quality Task Force of Southwest Louisiana (AQTF of SWLA). A list of our members is in Attachment II.

Our Mission

The AQTF of SWLA is committed to improving air quality in the Lake Charles MSA (Calcasieu and Cameron parishes) of Southwest Louisiana through voluntary actions and reasonable, practical regulatory actions.

Our Goals

- Improve air quality through voluntary actions;
- Create public awareness and promote individual responsibility through education; and
- Provide credible measures of air quality improvement efforts.

The AQTF of SWLA has determined that our “path forward” should include the following tasks:

1. Develop and implement an effective public awareness/outreach program;
2. Identification and documentation of ozone mitigation measures already implemented in the Lake Charles MSA;
3. Identification and documentation of ozone mitigation measures that are in the process of currently being implemented, including scheduled completion dates;
4. Research, analysis, and compilation of additional steps that would be feasible and
5. cost-effective for implementation in the Lake Charles MSA;
6. Selection of a suite of measures for which to pursue implementation;

7. Annual check-ins, to provide the status of local air quality, measure, and programs in place and lessons learned. Re-evaluate and revise path forward as necessary.

The AQTF of SWLA continually asks its members at each of its meetings to help identify, evaluate, and implement innovative ozone mitigation measures in the Lake Charles MSA area to help improve air quality and maintain attainment status in the NAAQSs for ozone and particulate matter. Information about the Advance Program and Ozone Action Days can be found on IMCAL's and the Chamber SWLA's websites.

To stimulate thinking about possible ozone reduction measures, our task force has compiled a preliminary list of innovative ozone mitigation strategies under the areas of alternative energy, energy efficiency, episodic controls, and urban heat island measures. Additionally, we feel it would be helpful to consider the various measures according to emissions sources categories:

- Area Source (e.g., homes, businesses, lawn care, agriculture)
- Mobile Sources
 - On-road (e.g., cars, trucks)
 - Off-road (e.g., trains, planes, marine vessels, construction equipment)
- Point Source (e.g., industrial facilities)

I. Overview

A. Growth in Southwest Lake Charles, Moss Bluff, and Carlyss Areas of Calcasieu Parish

According to Calcasieu Parish Census 2010 results, the population of the area was approximately 192,768 people. From 2000 to 2010, the Calcasieu Parish population growth percentage was 5.0% (or from 183,577 people to 192,768 people).

Areas grew in population increases by means of expansion and also growth, but some declines in the 2010 Census are evident from the 2000 Census. The areas with increases could be mainly equated to the housing explosion prior to Hurricane Rita of 2005. Moss Bluff/Gillis and Southwest Lake Charles continue to depict a stronger growth pattern adding to this region.

Carlyss, Sulphur, and north Sulphur continue to have some increase in this region with additional growth. The state experienced an increase in population by 1.4% totally, while continuing to remain about 50% urban and 50% rural.

The area is composed of a mixture of land uses ranging from woodlands, marshes, swamps and vacant land to strip commercial uses, highly residential subdivisions, municipal buildings, and heavy industrial uses. Residential areas comprise a large portion of the land uses in this metropolitan area. Certain social and economic characteristics of the population are important links to understanding the transportation needs of the metropolitan area. Population and associated developments, particularly as a result of the booming petrochemical industry, is spreading further out from the parish centers, although ozone has

remained relatively constant.

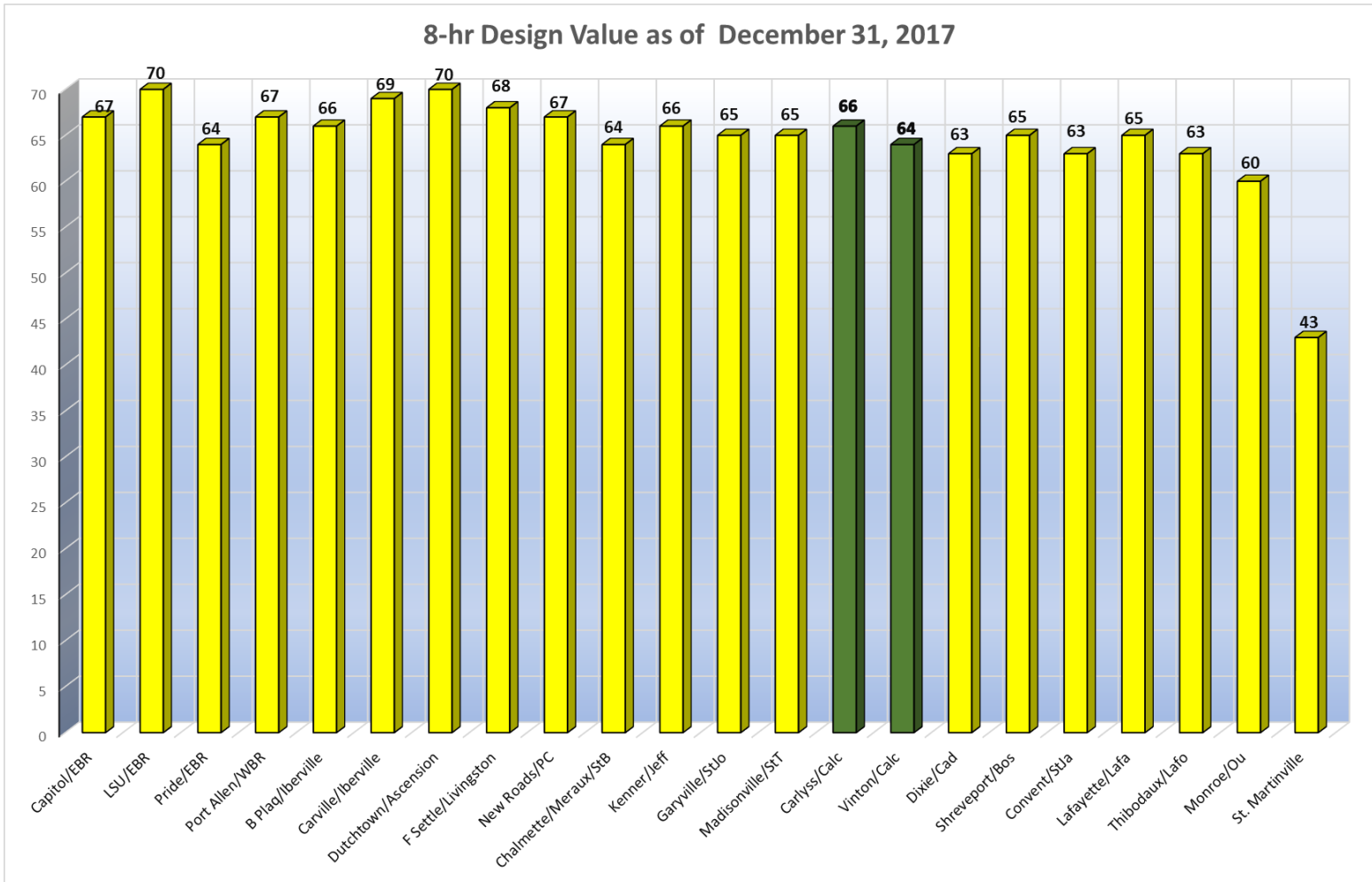
B. Ozone Chemistry

Ozone is formed when NO_x and VOCs found in the emissions from cars, power plants, and other sources react in the presence of sunlight. Hotter temperatures and increased sunlight during summer months create the perfect conditions for this reaction to occur.

How is attainment determined? The 3-year average of the fourth-highest daily maximum 8-hour average ozone concentration measured at each monitor within an area provides an ozone “design value or DV” for each monitor. The monitor with the highest DV becomes the DV for the area. The 8-hour primary ozone standard is 70 parts per billion (ppb). With these standards, air quality determinations are growing more regional in character with the impacts of key pollutants like ozone and particulate matter pollution. See the graphs below for a view of how our ozone design values have changed over the past several years.

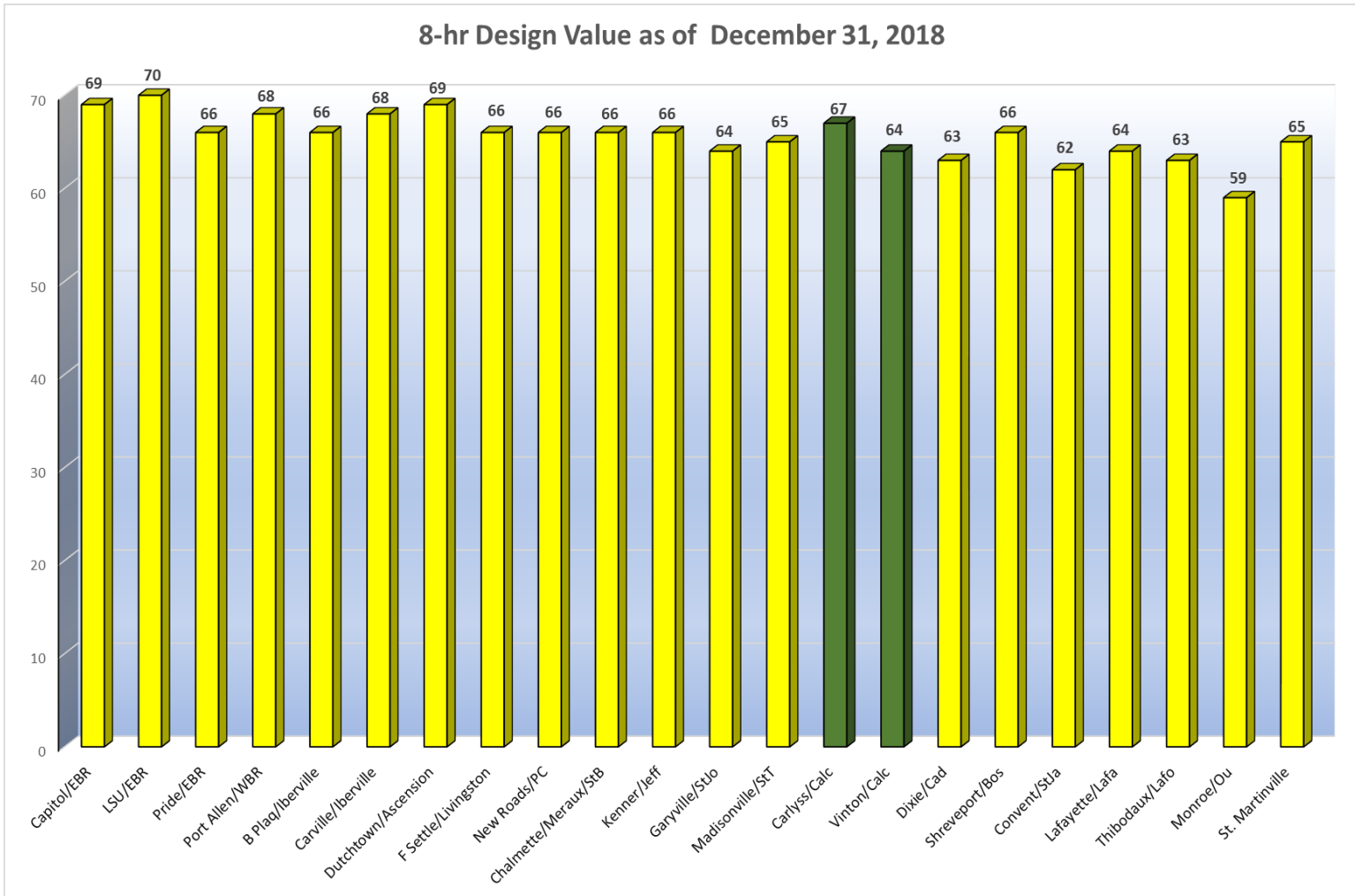
The graphs below show unfluctuating design values in the two area monitors results (Carlyss and Vinton)

2015-2017 Design Values

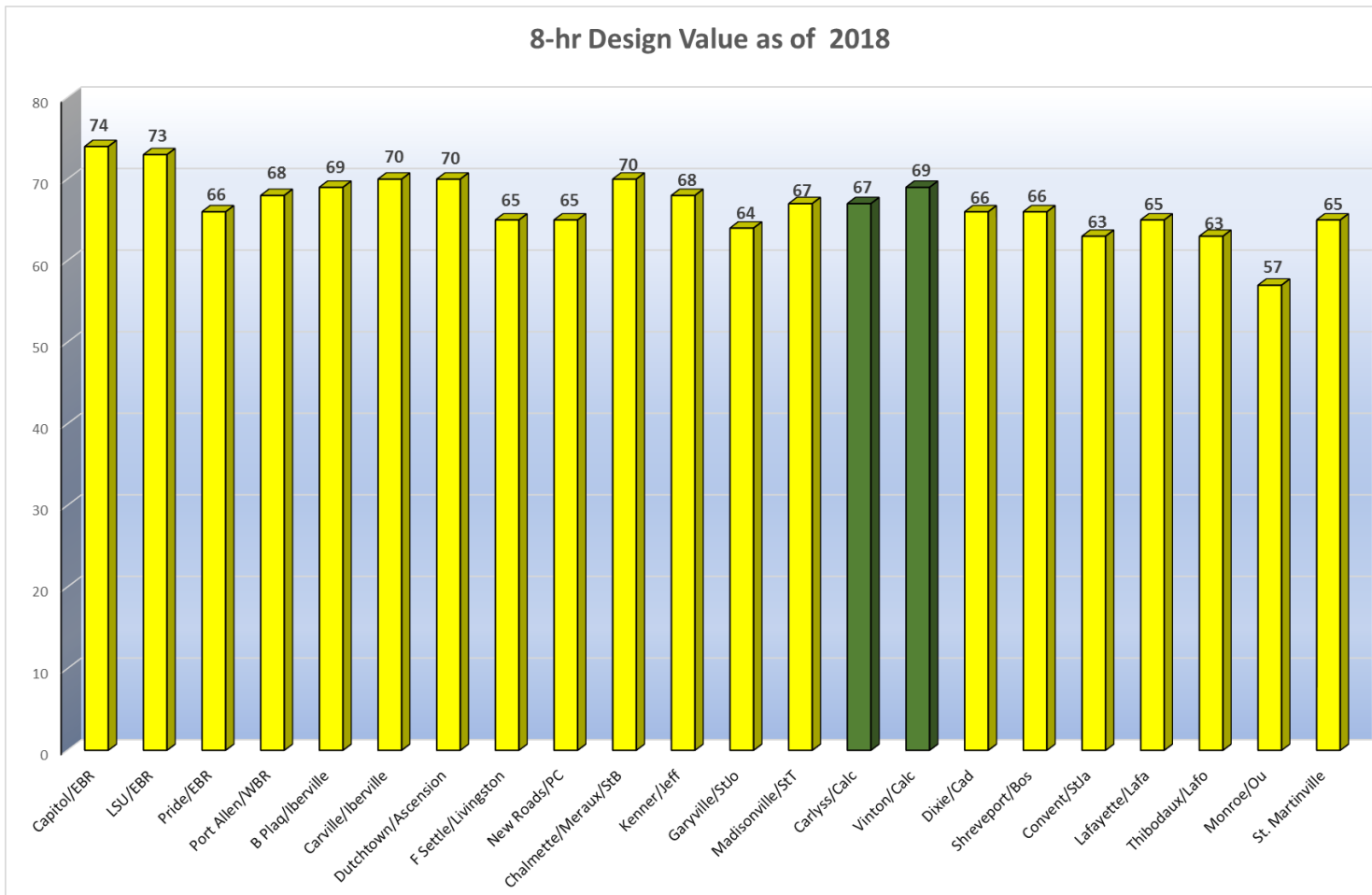


Source: DEQ

2016-2018 Design Values



2018 Design Values



Reductions in Ozone formation

To address the ozone problem the prudent approach is to seek reductions in the overall pollution burden, including potential reductions of NO_x and VOCs, the ozone precursors. A variety of studies have shown that both major precursors should be controlled to effectively reduce ozone pollution, their amounts based on local meteorological conditions and the chemistry of ozone formation.

As part of its efforts to better understand ozone formation in Louisiana, the DEQ completed its Technical Support Document (TSD) that documents current and modeled future emissions across the entire state. That document is available at http://www.deq.louisiana.gov/portal/Portals/0/AirQualityAssessment/Engineering/Ozone/LDEQ_TSD_4Oct13.pdf.

Ozone formation is so dependent on local concentrations of the precursors VOCs and NO_x (which vary spatially and temporally) as well as meteorological effects that affect mixing rates, a more detailed review of the TSD will be necessary to determine the appropriate controls required to achieve broad reductions over a wide area such as the Southwest Louisiana region.

Ozone Pollution in the Context of a Changing Climate

The formation of ozone is impacted by climate. The atmospheric chemical processes that control the production of ozone are determined largely by the volume of ozone-forming contaminants together with temperature and other factors such as sunlight and relative humidity. As the temperature and other meteorological factors change, production of air pollutants also will be affected. For example, as temperatures increase with larger amounts of sunlight, ozone levels also will rise. Strategies for improving air quality traditionally have been assessed by examining the relative benefits of different emission reduction strategies and assuming that changes in climate were not a factor. As predictions of changes in the climate over the next few decades are increasingly acknowledged by the scientific community, the impacts of these changes in temperature and other meteorological factors on air quality need to be factored into air quality assessments. Many studies are already demonstrating the impacts of climate change on future air quality, in particular, the anticipated increases in ozone and particulate pollution production in many areas.

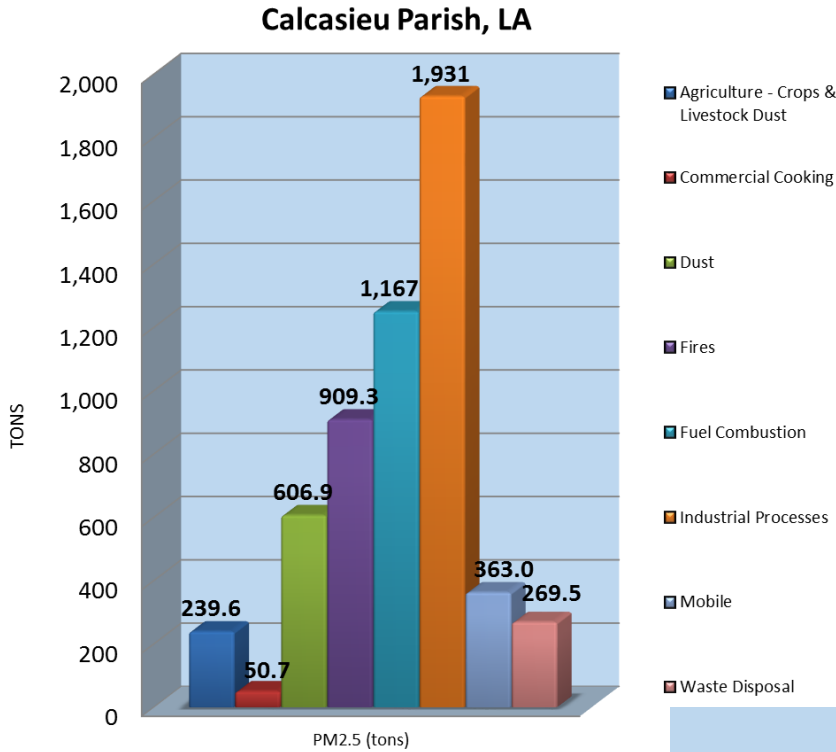
C. Particulate Matter (Air Pollutants)

The Air Quality Task Force also agreed to work toward reviewing and developing actions for PM. Canada and the United States continue to work toward instituting regulatory programs for reducing PM. The current NAAQS for Particulate Matter is 12 µg/m³. The Lake Charles area Design Value has been below 12 µg/m³ for the past several years. The Air Quality Task Force will continue to monitor these numbers very closely and will also continue to develop strategies for reducing PM pollution. The next section lays out possible strategies.

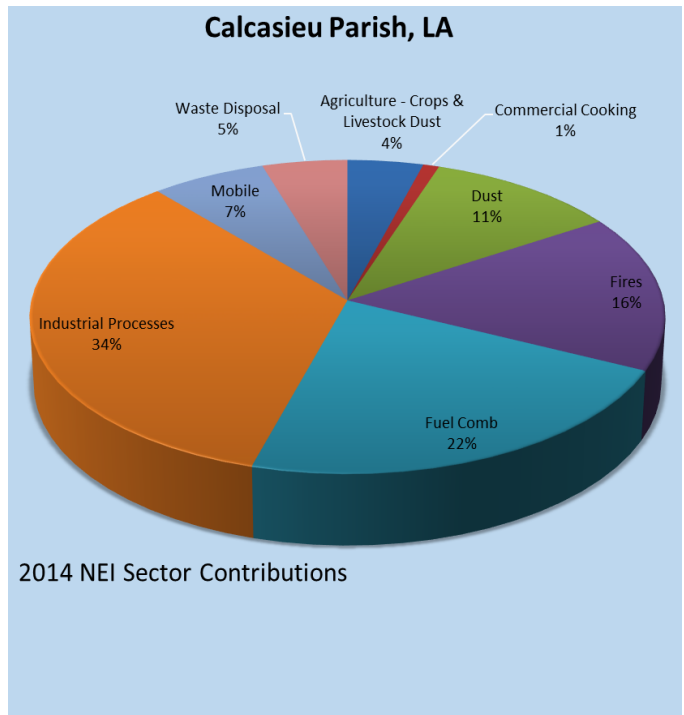
D. National Emissions Inventory Profiles

The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emissions sources. The NEI is released every 3 years, using the Emissions Inventory System (EIS) to compile data from State, Local, and Tribal air agencies, combined with additional data sources.

Calcasieu Parish, LA National Emission Inventory Contributions



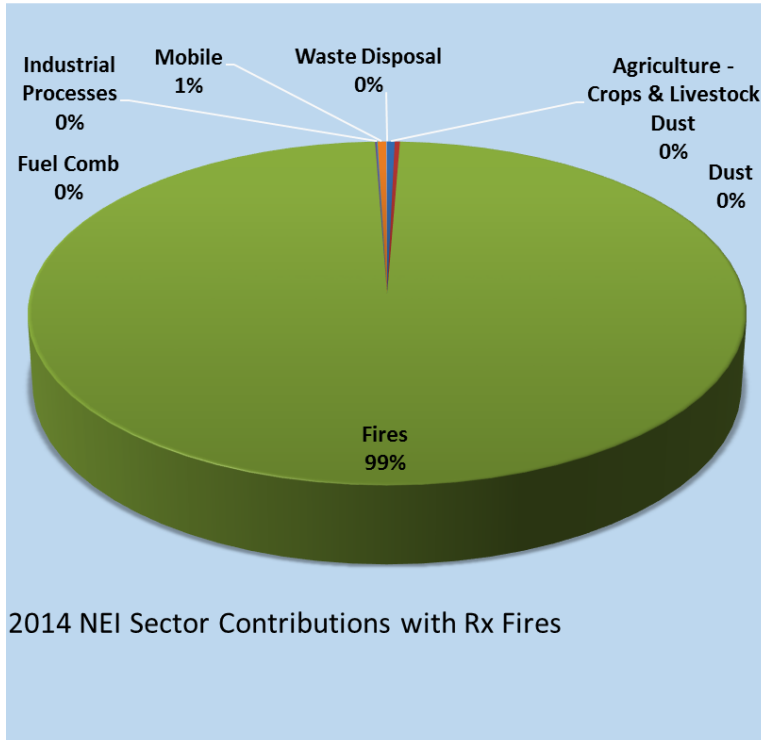
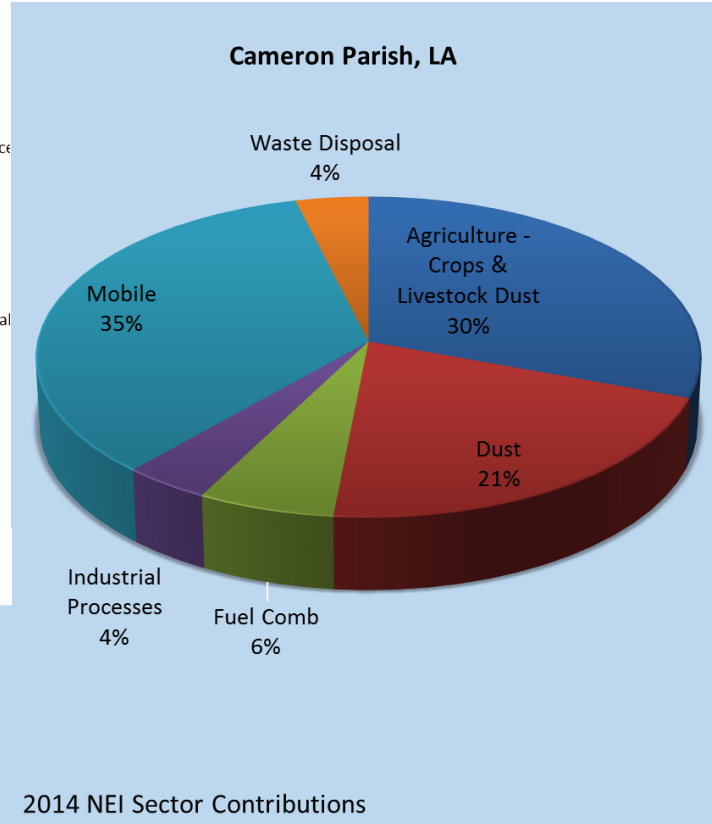
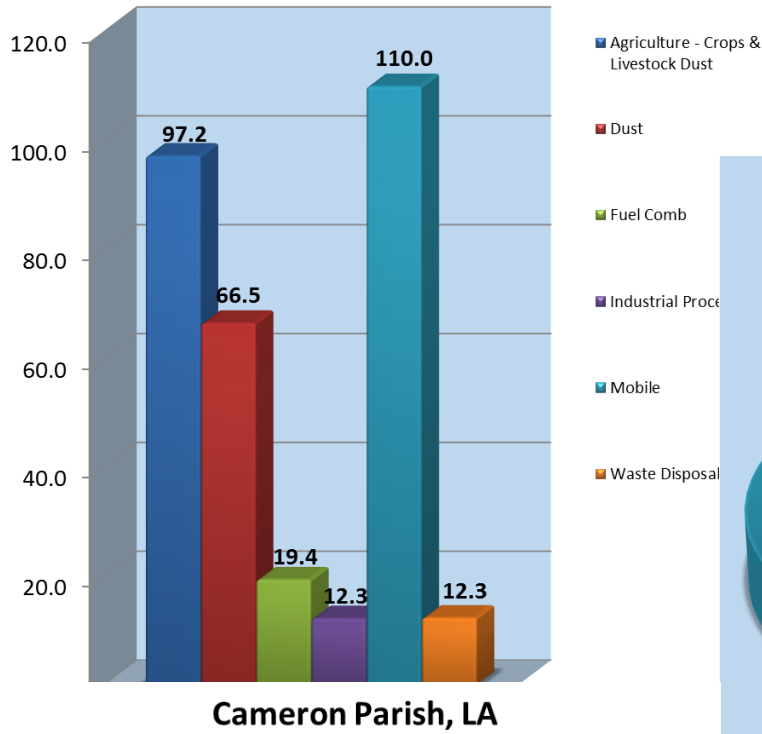
2014 NEI Sector Contributions



2014 NEI Sector Contributions

Cameron Parish, LA National Emission Inventory Contributions

Cameron Parish, LA



II. Reduction Strategies

A. List of Innovative Pollution Mitigation Strategies

Alternative Energy

- Use of Renewable Energy in the Residential and Commercial Sector
- On-Road Fleet Vehicle Retrofitting/Alternative Energy Incentive Program
- Off-Road Vehicle Retrofitting/Alternative Energy Incentive Program (e.g. Tug Boats, Locomotives)
- Incentive Program for Use of Alternative Energy/Clean Fuels in Non-Road Source Category (e.g. Construction)
- Truck Idle Emission Reductions
- Locomotives Idle Emission Reductions
- Waste to Energy
- Tax Credit for Purchase of Alternative Fuel On-road Vehicles for Non-Commercial Use
- Renewable/Cleaner Energy in Oil and Gas Industries

Energy Efficiency/Renewable Energy

- Green Buildings
- Building Energy Management
- Energy Efficient Lighting
- Energy Star Program
- Combined Heat and Power (CHP)
- State EERS Standards
- Indirect Source Mitigation
- Public Outreach/Education
- Weatherization of Older Homes in Low Income Areas
- Expanded Research, Development, and Demonstration (RD&D)
- Indirect Source Mitigation for Mobile Sources

Episodic Controls

- Electric Demand Days (HEDD) Program
- Traffic Congestion Mitigation and Reduction
- Delay of Low priority Activities
- Use of Low Emission Fuel High

Urban Heat Island

- Reflective Roofs
- Increase in Vegetative and Tree Canopy Cover
- Environment Surface Albedo Changes – Public Sector
- Environment Surface Albedo Changes – Private Sector

B. Reduction of Vehicle Emissions

Clean Car Campaign

The Clean Cars Campaign is an informal alliance of dozens of state, local and national health and environmental organizations working together to promote cleaner motor vehicles, including vehicles that emit fewer greenhouse gas emissions. Each member organization has its own governing board and sets its own policies. Member groups do not pay to participate in the campaign. Currently Louisiana is not participating in this Campaign.

Anti-Idling Ordinances, Financial Incentives and Voluntary Measures

Measures to Reduce Truck Idling

EPA estimates that idling trucks consume, annually, over 950 million gallons of diesel fuel, and emit approximately 200,000 tons of NO_x and over 10 million tons of carbon dioxide (CO₂). The average emissions per a heavy-duty diesel truck are 12 grams per hour of HC, 140 grams per hour of NO_x and 8200 grams per hour of CO₂. Heavy duty diesel trucks are also considerable fuel- guzzlers, consuming about 0.80 gallons per hour of idling. There are a number of ways to reduce truck idling: anti-idling regulation; voluntary measures; and financial incentive programs.

Anti-Idling ordinances can play an important role in reducing truck idling and emissions. The trucking industry has identified inconsistency in state and local idling laws as a barrier to greater implementation of idle reduction technologies and strategies. Approximately fifteen states and dozens of local jurisdictions currently have idling laws. Anti-Idling ordinances from other areas are being evaluated to determine their usefulness in this area.

A significant portion of the trucking industry has embraced various idling technology to save fuel and decrease emissions. A survey of local trucking companies and businesses with fleets will be contacted and encouraged to join the effort to reduce emissions.

Numerous technologies are currently available to help companies reduce fuel consumption and install idling technology. However, one of the major barriers to widespread adoption of retrofits, auxiliary power units (APUs) and other voluntary measures is a lack of investment capital. State loan programs can greatly assist trucking companies interested in doing the right thing to attain their idling reduction goals. State loan programs are being investigated to reduce investment capital requirements for small and medium firms. The National Clean Diesel Program offers a variety of funding sources to reduce diesel emissions. More information can be found at <http://www.epa.gov/cleandiesel/index.htm>.

Employer Trip Reduction Program

Employer-Based Trip Reduction Programs are designed to reduce vehicle miles traveled by single- occupancy commuters traveling to and from their place of employment. Through the program, large employers develop a “trip reduction program” and an annual report documenting methods

they have adopted for reducing single occupancy vehicle commuting commensurate with a pre- defined level. Local industries and businesses will be contacted for possible participation.

Actions included in the trip reduction plan can include but are not limited to the following:

- Subsidized bus passes
- Rideshare matching programs
- Vanpool leasing programs
- Telecommuting programs
- Compressed work week schedule programs and flexible work schedule programs
- Work site parking fee programs
- Preferential parking for rideshare participants
- Transportation for business related activities
- A guaranteed ride home program
- On-site facility improvements
- Soliciting feedback from employees
- On-site daycare facilities
- Coordination with local transit authorities for improved mass transit service and information on mass transit programs
- Recognition and rewards for employee participation

Consumer Incentive Programs

The public's awareness of the importance of issues such as climate change and ozone pollution are on the rise. Accordingly, programs that provide the public with relatively easy and inexpensive ways to reduce ozone pollution and help the environment are likely to be successful and cost effective.

Some such programs may include:

- Voluntary usage of electric lawn mowers and garden equipment during hot summer days or on weekends;
- Local store cash rebates or vouchers for the purchase of electric lawn mowers and garden equipment;
- Local tax breaks and energy efficiency rebates for the purchase of electric lawn mowers and garden equipment;
- Green certification for lawn care companies that primarily use electric and low-emission gas equipment and mowers;

Expanded Transit Alternatives

Reducing ozone precursors from on-road mobile sources can be accomplished through tightening vehicle emissions standards, emissions inspection programs, fuel reformulation, and reducing vehicle miles traveled (VMT). VMT reduction is perhaps the most challenging strategy yet brings important ozone and transit improvements that have multi-pollutant benefits. Given the challenge of developing a durable blueprint to restore healthy air, transportation plans designed to minimize on-road emissions are critical. Lake Charles Transit will be asked to review the following items and determine if they are applicable to their system

I. Neighborhood ECO-Pass Program

Transit Agencies could provide a deeply discounted annual bus pass to neighborhood organization for all members of participating households. Eco-Pass is a photo ID bus pass that entitles residents to one year of unlimited travel on all fixed transit routes. For example, this program has been implemented in the City of Boulder since 2005. To date, 24 neighborhoods in Boulder offer the Neighborhood Eco Pass (NECO) Pass to nearly 4,430 residents. With additional subsidies provided by the City of Boulder, the annual cost for this pass is \$56 to \$128 per household.

II. Free Rides on High Pollution Days

Offering a free ride can increase bus ridership on potentially high pollution days. This was the operating principle for transportation officials across Northern Virginia. Local bus routes across Fairfax, Arlington, and Loudon Counties offered free bus service on high pollution days through mid-September 2007. Free ride days can increase awareness of unhealthy air quality conditions and encourage more people to be aware of when high pollution day alerts are called. It would also introduce people who usually drive to the bus system so they will be more likely to use it in the future. Local transit could consider offering three free passes to anyone who pledges to use alternative transportation at least once a week through the through a campaign initiative called something like “Drive Smart Day”

Alternatively, this program could be enhanced to provide bus passes to pledge participants that could be used for free rides on high pollution days during the summer.

III. Bus Smart Card

Smart Cards reduce the amount of time bus users have to wait in line, eliminate the need for correct change, and encourage ridership. Though costly, this action could substantially increase the ridership and allow more flexibility in billing structures.

One card, being installed in the U.K., the “No W card” features a photograph of the holder and is loaded with data, which identifies the concessionary fare entitlement of the holder. When the holder presents his No W card to the ticket machine on the bus for the first time, the smart card automatically prompts the ticket machine to calculate the relevant fare and any other incentives such as age or employer programs. Through this \$9 million program, 300,000 No W cards have already been issued with the aim of having all 1,800 buses in the region operating the smart ticketing technology by the autumn of 2007.

III. Initiatives Area Wide

A. Municipalities/Government Agencies

- City of Westlake continued steps to implement a Compressed Natural Gas station.
- IMCAL produced several strategies.
 - Promoted transit with more human service agencies, including a
 - Facilitated Complete Streets committee meetings to maximize use of highways for all users, including increased infrastructure for pedestrians and bicyclists, determine sidewalks and trail inventory, and create a metropolitan wide policy
- EPA School Flag Program.
http://airnow.gov/index.cfm?action=school_flag_program.index
 - St. Margaret Catholic School
 - Bishop Noland Episcopal Day School

B. Industry

- LAIA members implemented projects (Members listed in Attachment III).
 - Sasol North America completed “1,000 Trees in 1,000 Days” tree planting program.
- Entergy
 - While demand for electricity in its service territory increases, Entergy has announced a goal to achieve a 50 percent reduction in emission rates (pounds of CO₂ per megawatt hour) from the 2000 level by 2030. As part of Energy’s sustainability strategy, the eTech program is a strategic electrification that promotes the adoption of electric-powered alternatives to many applications that traditionally require fossil fuels. The program provides customer support through dedicated field representatives and financial incentives to Entergy customers who purchase select electric equipment, such as electric forklifts, burden carriers, man-lifts, golf cars, floor scrubbers, car chargers, and many others. Electric equipment produces zero site emissions for a cleaner, healthier work environment. Through the project Entergy has assisted displacing 50,888 metric tons of CO₂ and 351 metric tons of NO_x from 2015-2018, which is the equivalent of removing 11,063 cars from the roads. More information is available at www.entergyetech.com.

C. Citizens

- IMCAL and Chamber Southwest websites offer online citizen guide for impactful tips to limit emissions.
- Promoting the use of EnviroFlash

D. Other Initiatives

- IMCAL and Chamber Southwest updated websites.
- IMCAL, as fiscal agent for Lake Charles Metropolitan Planning Organization (LCMPO), completed the 2045 Metropolitan Transportation Plan, the 25-year horizon long-range transportation plan for the Lake Charles Urbanized Area.
 - In conjunction with citizen, stakeholder and consultant input and analysis, LCMPO added bike/ped and transit projects the document, as ways to reduce air pollution.
- Featured speaker from University of Louisiana at Lafayette talked with Advance Program stakeholders about their campus wide sustainability program.

IV. Action Plan

The Action Plan largely consists of educating our members and the public of the local air quality issues, promoting awareness and strategies to reduce ozone and particulate matter. The following strategies will be used as a guide and will be continually updated as new ideas are formulated.

To address particulate matter, the air pollutant most commonly associated with premature mortality, based on comparable regulatory regimes in the two parishes.

Action Item 1: Review of Science

The first six months will focus on foundational work to develop and decide upon options for updating the scientific analysis of transboundary and to identify these MSA related regulatory actions. Additionally, technical review of regulatory development will take place along with regular information sharing among experts. Within 6 to 12 months, both sides under the auspices of the AQTF will assess and discuss possible scope and nature of commitments under the Advance program, including potential regulatory actions that could be considered as a basis.

- Beginning January 1, 2014: Within AQTF, select an option for updating the analysis and initiate technical review of the science assessment on boundary movement of PM, including:
 1. Identification of sources
 2. Magnitude and pattern of boundary flows
 3. Health impact assessments.
 4. Six to 12 months: Ongoing science assessment, and data-sharing
 5. Assessment of boundary PM
 6. Report progress and key findings to AQTF
 7. 12 to 18 months: Finalize science assessment
 8. AQTF recommendation on science elements of the Annex.

Action Item 2: Parishes Regulatory Actions to Reduce PM

- Beginning January 1, 2014: Within AQTF, identify parishes' PM-related regulatory actions
- Technical review and information sharing between experts on regulatory development in both parishes
- Six to 12 months: Assessment of potential regulatory actions, including timelines, entry into force and impacts on emissions.
- Within the AQTF, initiate discussion on possible scope and nature of commitments under the PM Annex.

Action Item 3: Engagement

- Beginning January 1, 2014: Information sharing on initiatives.

- Six to 12 months: Stakeholder updates and debriefs, as appropriate.
- 12 to 18 months: Stakeholder updates and debriefs, as appropriate.
- Beyond 18 months: Stakeholder updates and debriefs, as appropriate.

The work outlined above will be conducted by the relevant members of the Air Quality Task Force, who nominally constitute the Working Group. Both parishes envision that these members will conduct the work in their roles on the task force within the process. The following strategies will be used by the task force as part of their educational toolkit when engaging the public.

Limit Your Driving

- Avoid driving during peak traffic periods when stop-and-go traffic is at its worst.
- Try not to drive at all, especially during the morning and early afternoon.
- Plan ahead, organize your trips. Combine several errands into one trip.
- Take your lunch to work to avoid lunch trips.
- Consider other commute options such as public transit, shared-ride, and/or telecommuting.

Drive Emission Wise

- If you must drive, use the least polluting of your vehicles.
- Where available, use clean fuels. Avoid excessive idling, and areas of congestion.
- Stop and start evenly.
- Drive at a steady speed. Drive at medium speeds. Use your air conditioner wisely.
- Travel light.
- Consider fuel efficiency and emissions when buying a new car.

Refuel Carefully

- Refuel after 6:00 p.m., if possible and avoid spills. Try not to top off your gas tank.

Maintain Your Vehicle

- Engine performance, emission control systems, and tire inflation are important.
- Do not remove or tamper with pollution controls. Comply with the local auto inspection and emissions testing program.
- Follow your owner's manual.
- Get regular engine tune-ups and car maintenance checks.
- Use an energy-conserving (EC) grade of motor oil. An EC multi-grade can improve your mileage by 2-4 percent. Source:
<http://www.articlesbase.com/cars-articles/using-synthetic-oil-to-improve-fuel-economy-569043.html>

Live Emissions Wise

- Buy low emission household products.
- Buy electric or fuel-efficient motorized equipment.

- Conserve electricity.
- Avoid spilling gas when refueling gasoline-powered lawn, garden, farm, and construction equipment and boats.
- Recycle waste. Team Green of Southwest Louisiana’s mission is to enhance the appearance and quality of the environment in Southwest Louisiana. More information about materials they collect and drop-off sites can be found at <https://www.cityoflakecharles.com/department/board.php?fDD=6-47>.
- Seal containers tightly.
- Reduce waste.

Delay or Reschedule Lawn care

- Reschedule or delay lawn care employing gas-powered equipment until after 6:00 p.m. An old 2-cycle gas-powered lawn mower produces as much pollution as 70 new running cars.
- Consider trading your gas-powered lawn mower for a reel push mower – they are easy to push and great exercise. How about trading the gas-powered leaf blower for a broom and a rake?

Postpone Oil-Based Paint and Solvent Use

- Where possible, use aqueous (water) based products.
- Avoid oil-based paint and solvent use on days when elevated ozone levels are expected.
- Many zero- and low-VOC paints and solvents are readily available in local hardware and paint stores.

Barbecue with Electric or Chimney Starters

- Avoid the use of lighter fluid, since it vaporizes into the air and can contribute to ozone formation.
- Your food will also taste better.

Conserve Energy in Your Home

- Conserving electricity reduces air pollution caused by power plants.
- Purchase energy efficient heating and air-conditioning systems.
- Purchase energy efficient appliances.
- Make sure your home is well insulated.
- Be mindful of energy conservation when you set your thermostat.
- Purchase energy efficient lighting.
- When purchasing appliances and/or electronic office equipment, consider the Energy Star qualified products. Information about Energy Star appliances is located at http://www.energystar.gov/index.cfm?fuseaction=find_a_product.
- Where available, participate in your local energy conservation programs.

Spread the Word

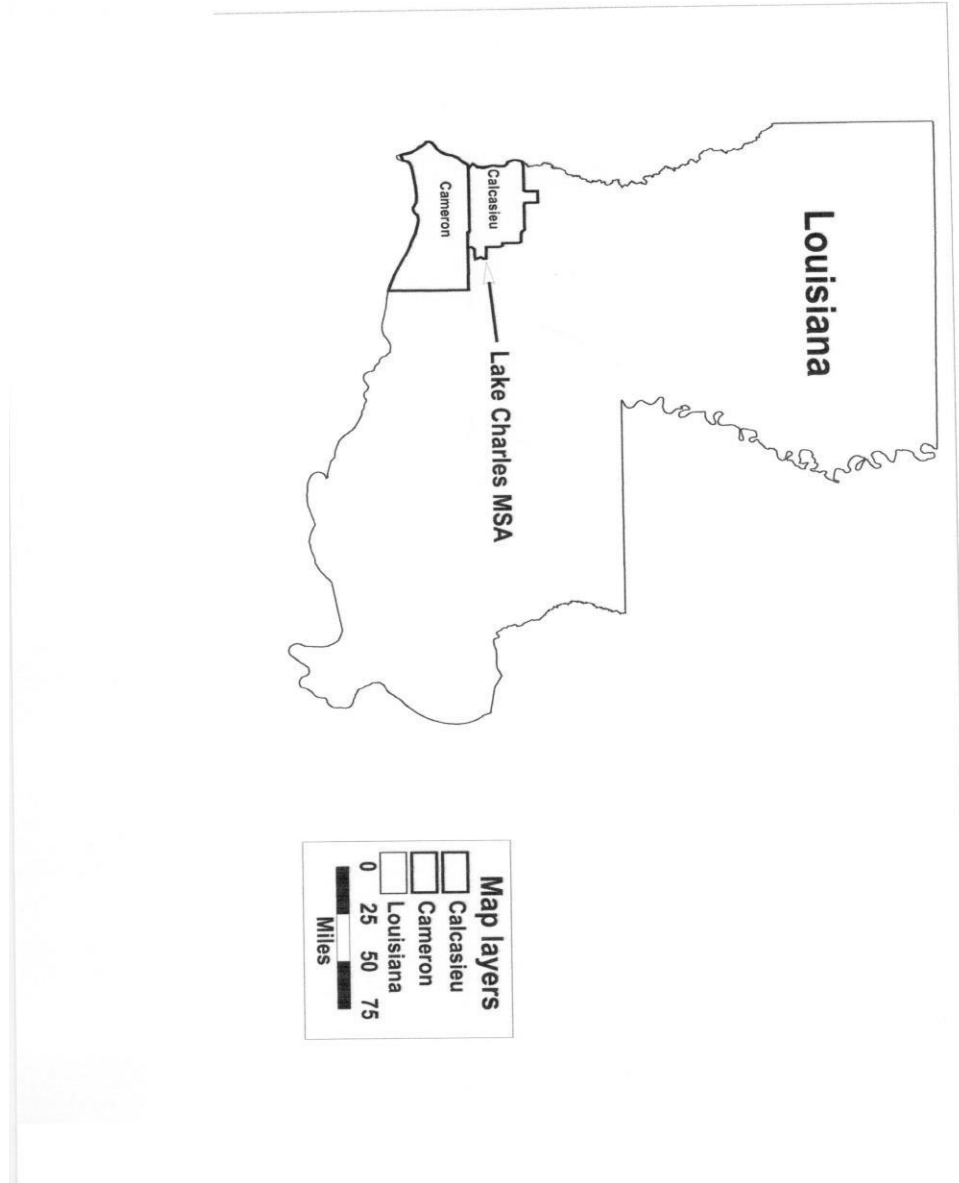
- Learn about local efforts and issues.
- Learn what you can do to help clear the air.
- Share what you learn.
- Let people know you care.
- Join a community group that is working to improve air quality.
- Improve air quality through voluntary actions.
- Create public awareness and promote individual responsibility through education.
- Provide credible measures of air quality improvement efforts.

V. Conclusion

Ozone and PM pollutions are serious public health and environmental problems. Our community is working to reduce these pollutants while expanding the quality of life in our area.

As the clean air strategies examined in this plan demonstrate, there are many available measures to reduce ozone. With a collective coalition of Southwest Louisiana local officials and concerned citizens, our Advance Program can win the fight against these pollutants and their concomitant adverse human health and environmental impacts, provided we act with determination and immediacy.

ATTACHMENT I



ATTACHMENT II

Members of Our Coalition Include:

- Calcasieu Parish Policy Jury
- Calcasieu Parish School Board
- Cameron Parish Police Jury
- Chennault International Airport
- City of DeQuincy
- City of Lake Charles
- City of Sulphur
- City of Westlake
- EPA Region 6
- Imperial Calcasieu Regional Planning and Development Commission (IMCAL)
- Lake Area Industry Alliance (LAIA)
- Louisiana Department of Environmental Quality (DEQ)
- Providence Engineering & Environmental Group, LLC
- Southwest Louisiana Economic Development Alliance/Chamber SWLA
- Town of Iowa
- Town of Vinton

ATTACHMENT III

Members of Lake Area Industry Alliance (LAIA)

Air Liquide	Lonza
Air Products	Louisiana Pigment
Alcoa	LyondellBasell Polymers
BioLab	Phillips 66 Lake Charles Manufacturing Complex
Boardwalk	Sasol
Cameron LNG	Southern Ionics
CertainTeed	Targa
PPG	TDC LLC
Citgo Refinery	Lake Charles LNG
Entergy	Waste Management
Firestone	Westlake Chemical
Grace	Indorama