

Rapides Area Planning Commission

OZONE Advance Program | *Path Forward*

2016



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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, separate 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 objectives are:

- ▶ Help attainment areas to ensure continued attainment of the ozone standard and health protection;
- ▶ Better position areas to remain in attainment; and
- ▶ Efficiently direct available resources toward actions to address ozone problems quickly.

We believe that participating in the program would facilitate the Alexandria Urbanized Area's (UZA) efforts to achieve and maintain the ozone standard as well as provide for possible mitigation of consequences of failure to attain the standard.

On April 2, 2015, the Rapides Area Planning Commission (RAPC) prepared a letter with the Notice of Intent and request to be accepted into the EPA's Ozone Advance Program. On April 7, 2015, RAPC received a letter from EPA indicating that the UZA met the eligibility criteria and was welcomed as a participant in this innovative program.

The UZA is not currently a non-attainment area for either the 2008 or the 2015 ozone National Ambient Air Quality Standards (NAAQS). The Louisiana Department of Environmental Quality has recommended that local government agencies reduce emissions by participating in the EPA Ozone Advance Program.

RAPC is developing a short and long-term plan of measures aimed at reducing ozone pollution in the UZA, which includes the City of Alexandria, City of Pineville, Town of Ball, as well as parts of Woodworth, Boyce, and all unincorporated Rapides Parish.

The Alexandria Urbanized Area might benefit from participating in the Program through:

- ▶ Enhanced ozone attainment efforts and greater probability for maintaining the NAAQS for ozone;
- ▶ EPA Assistance;
- ▶ A launchpad 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.



INTRODUCTION

Who We Are

RAPC is the Metropolitan Planning Organization (MPO) for the Alexandria/Pineville area. This area includes the City of Alexandria, City of Pineville, Town of Ball, as well as parts of Woodworth, Boyce, and all unincorporated Rapides Parish. The scope of this program focuses on the UZA in Louisiana.

The program also includes collaboration between metropolitan planning and economic development organizations, local governments, state environmental agencies, businesses, industries, educational institutions and other community collaborators working in partnership with the Louisiana Department of Environmental Quality (LDEQ) to improve air quality in the UZA.

Mission

RAPC is committed to improving air quality in the Alexandria Urbanized Area through voluntary actions and reasonable, effective regulatory actions.

Goals

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

RAPC has determined that our “path forward” should include the following tasks:

- ▶ Develop and implement an effective public awareness/outreach program;
- ▶ Identify and document ozone mitigation measures already implemented in the UZA;
- ▶ Research and analyze additional feasible and cost-effective implementation measures within the UZA;
- ▶ Select a suite of measures and pursue implementation;
- ▶ Annual status updates for local air quality, measures, and programs in place and lessons learned. Re-evaluate and revise path forward as necessary.

RAPC continually seeks to help identify, evaluate, and implement innovative mitigation measures in the UZA to help improve air quality and maintain attainment status in the NAAQS for ozone and particulate matter.

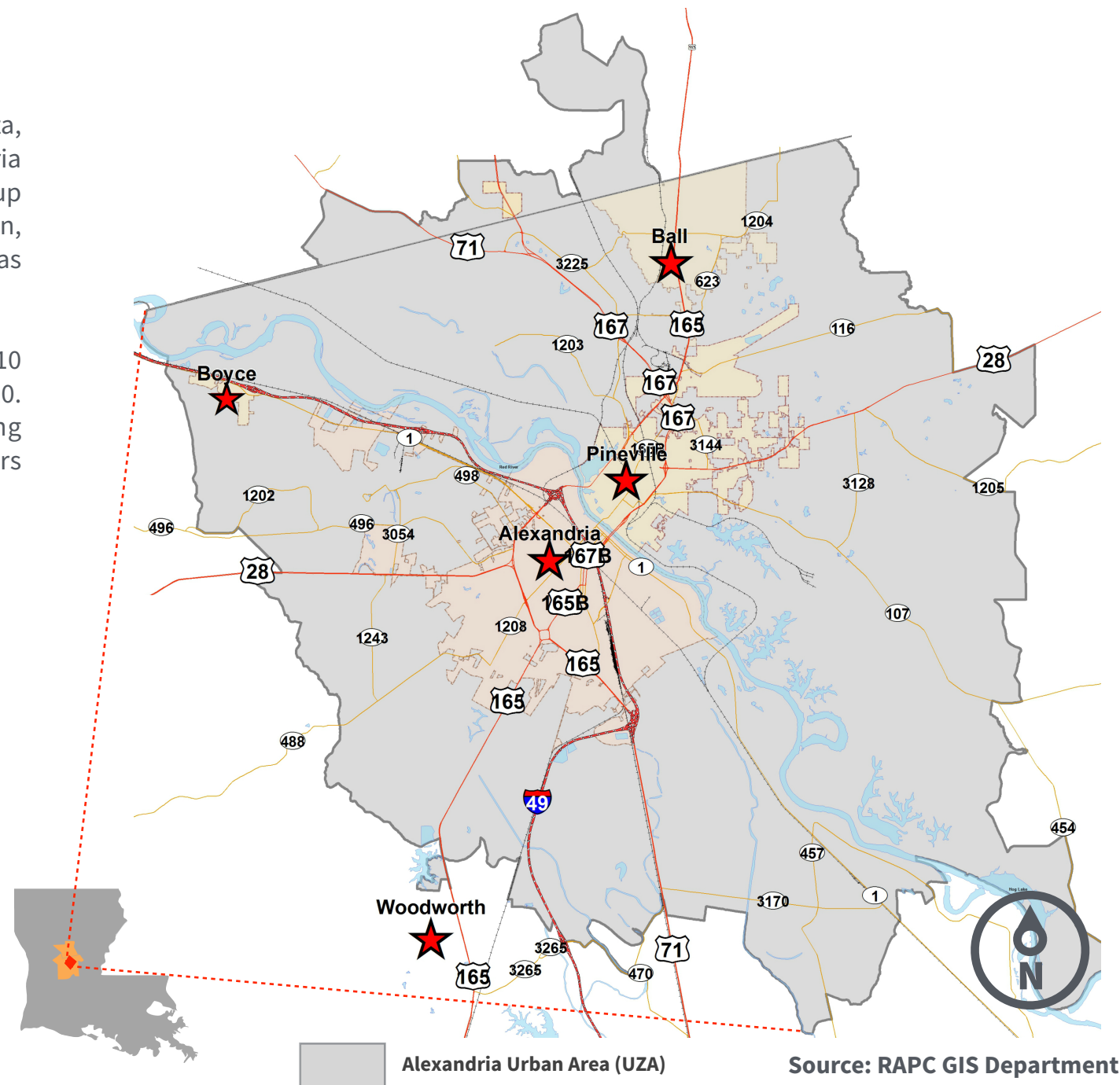
RAPC has compiled a preliminary list of innovative ozone reduction measures to address urban heat island mitigation, mobile source emissions, vehicle miles travelled, energy efficiency, and awareness.



Based on the 2010 Census and permitting data, the household population of the Alexandria Urbanized Area (UZA) was 88,036 persons. Group quarters population (college, military, prison, etc.) was 5,157. Total population of the UZA was 93,193 persons.

A stacked bar chart comparing the number of people in households and groups in 2010 and 2015. The Y-axis represents the number of people, ranging from 0 to 225,000 in increments of 75,000. The X-axis shows three categories: Household, Group, and Total. The bars are stacked by year, with 2010 in red and 2015 in blue.

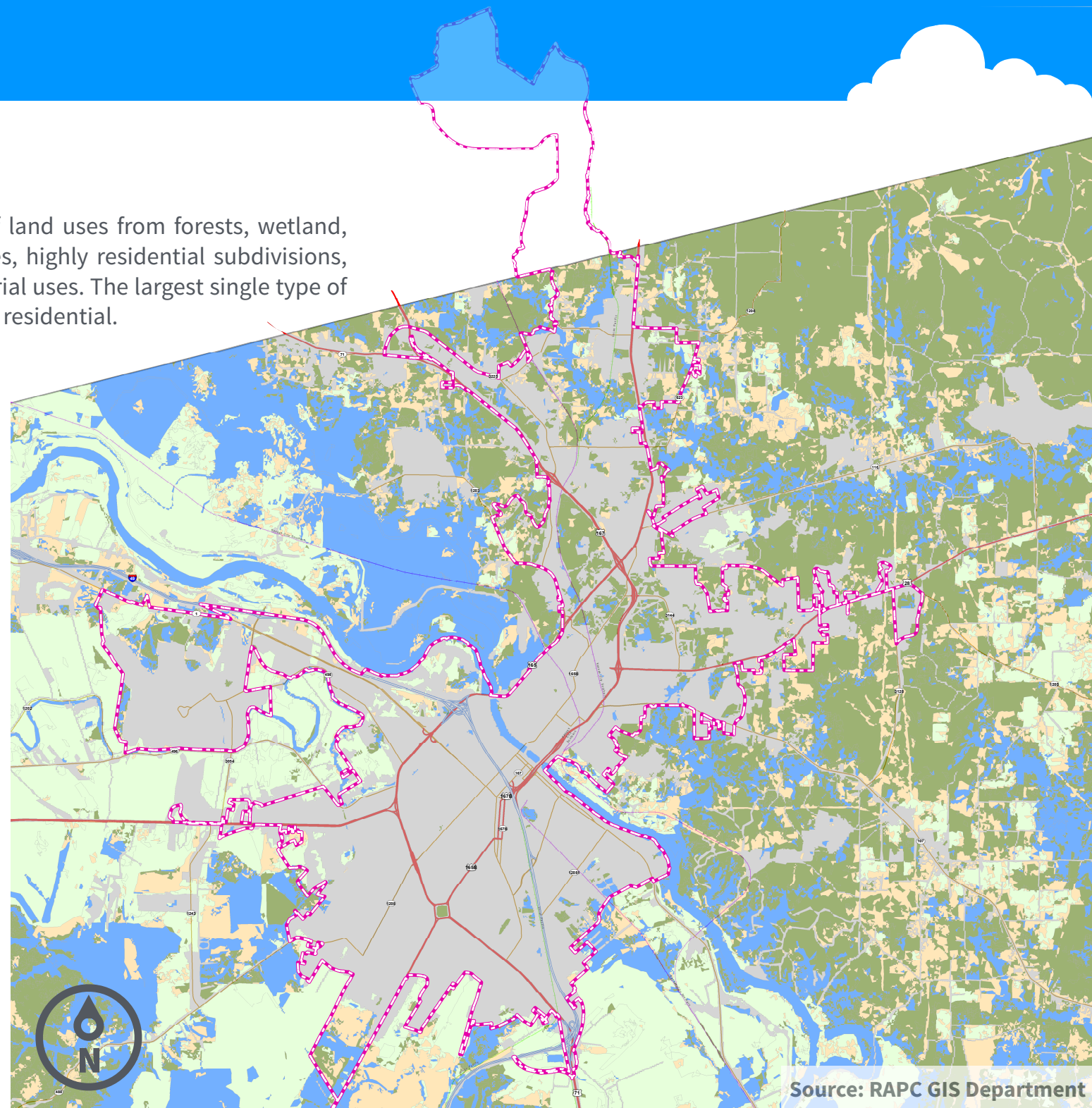
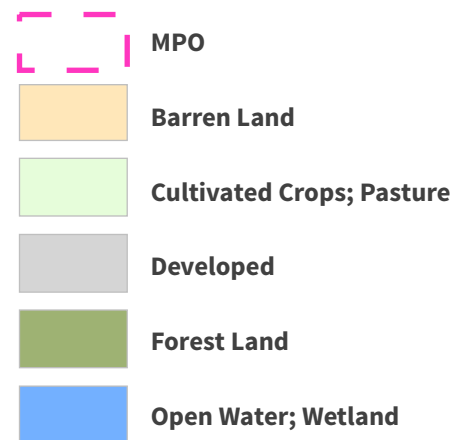
Category	2010	2015
Household	~95,000	~115,000
Group	~5,000	~10,000
Total	~100,000	~125,000



OVERVIEW

Alexandria Urbanized Area Land Use

The area is composed of a mixture of land uses from forests, wetland, and farmland to strip commercial uses, highly residential subdivisions, municipal buildings, and heavy industrial uses. The largest single type of developed land use in the study area is residential.



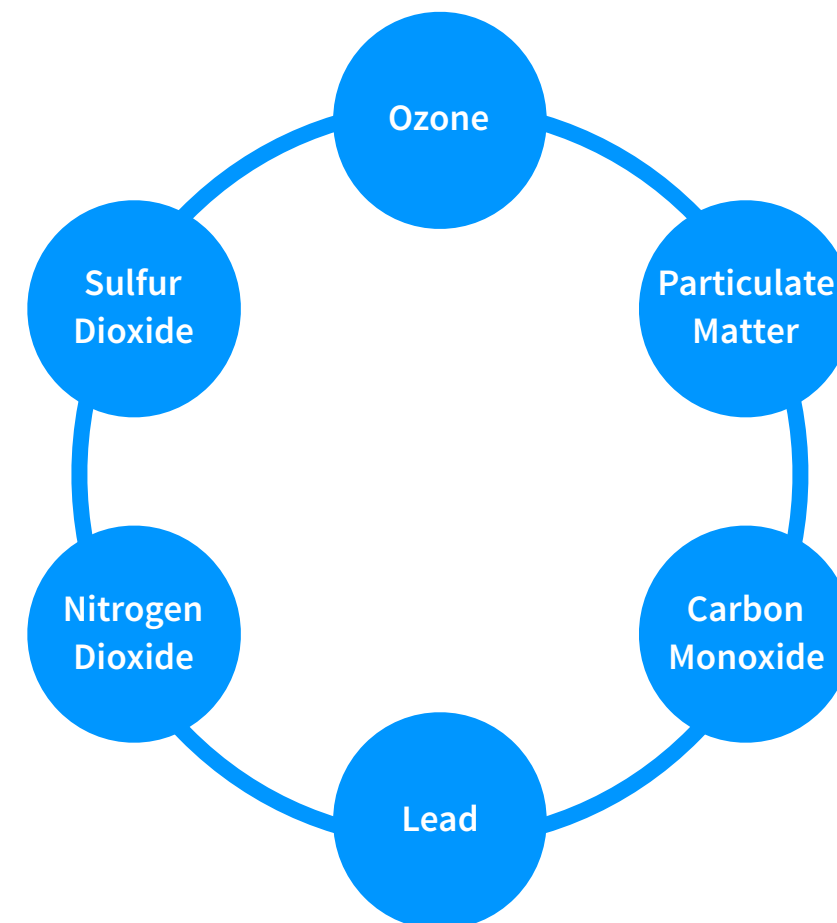
WHAT IS AIR POLLUTION?

Air pollution is the presence of substances, both gases and particles, in the air in amounts that cause discomfort or are harmful to the health and well-being of humans, animals, plants or materials.

The U.S. Environmental Protection Agency (EPA) has set both primary and secondary National Ambient Air Quality Standards (NAAQS) for six principal pollutants, which are called “criteria” pollutants. Primary standards provide public health protection, while secondary standards provide for the protection of public welfare. These six criteria pollutants include: ozone, particulate matter, carbon monoxide, lead, nitrogen dioxide and sulfur dioxide.

Ground-Level Ozone (Ozone)

Ground-level ozone is not emitted directly into the air, but is formed by a series of complex atmospheric chemical reactions that involve nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of sunlight. NOx is produced almost entirely as a byproduct of high-temperature fossil fuel combustion, such as power generation and mobile sources. VOCs include many chemicals that vaporize easily, such as those found in gasoline and solvents emitted from industrial sources and vehicles.



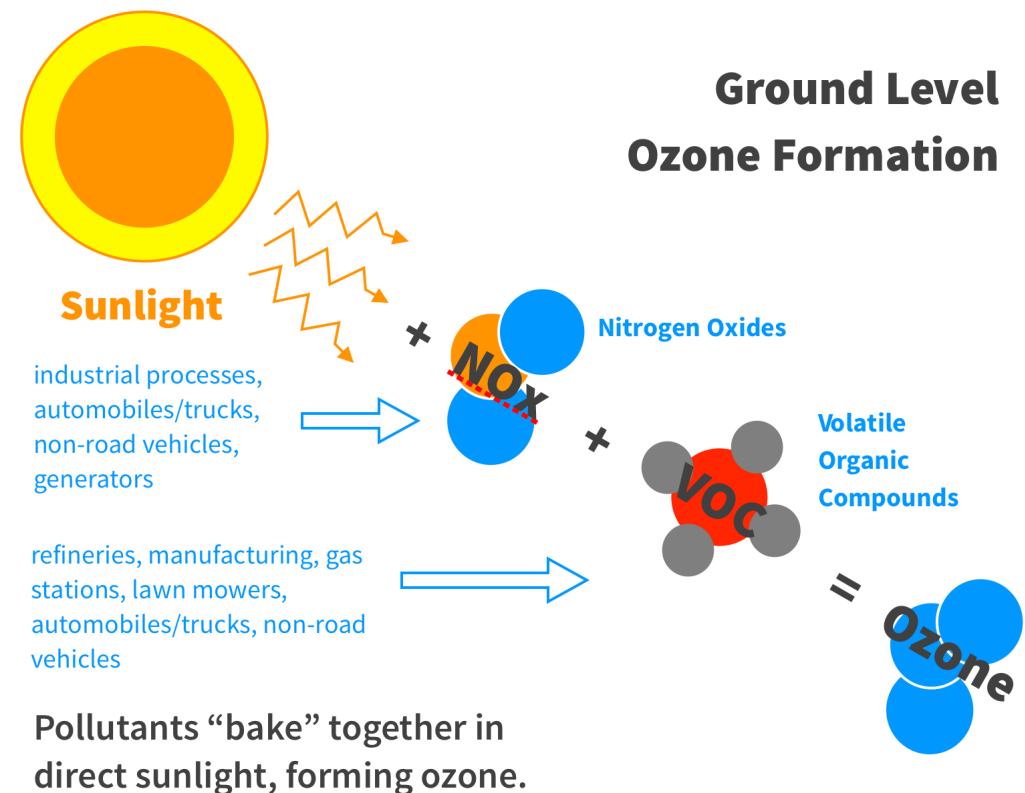
WHAT IS AIR POLLUTION?

Nitrogen OxIDES (NOx)

NOx is a generic term for the family of seven mono-nitrogen oxide compounds (NO). EPA regulates only nitrogen dioxide (NO₂) as a surrogate for this family of compounds because it is the most prevalent form of NOx that is generated by human activities. Ozone is produced from the reaction between nitrogen and oxygen gases (NOx) in the air during combustion, especially at high temperatures. NOx is linked to a number of adverse effects on the respiratory system. This includes cars, trucks, buses, railroad engines, construction vehicles, and vehicles used to move goods within warehouses and manufacturing plants.

Volatile Organic Compounds (VOCs)

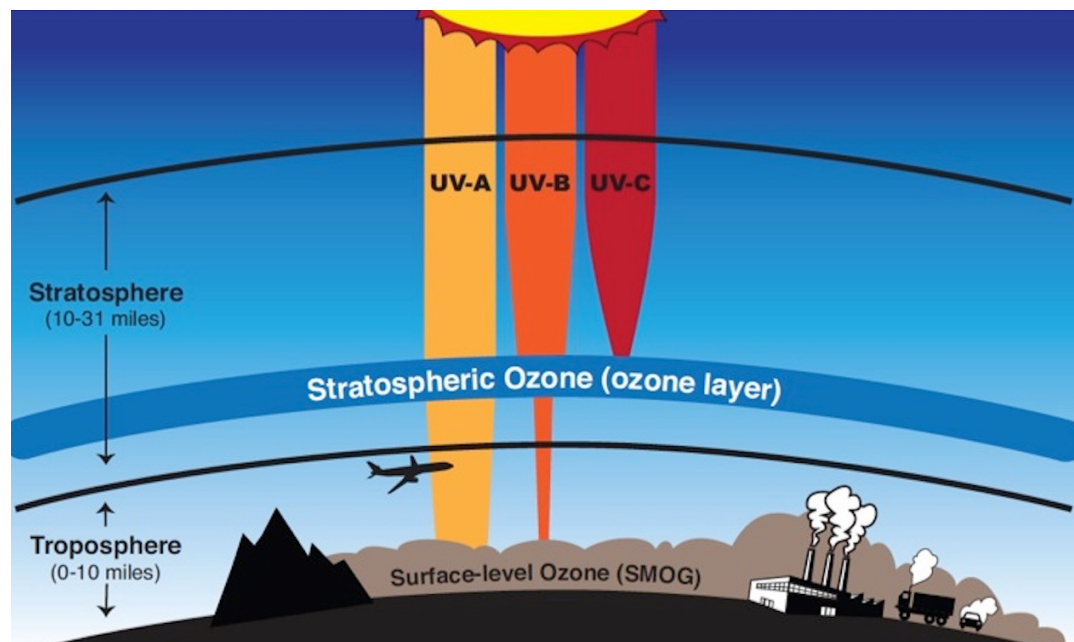
A Volatile Organic Compound (VOC) is the name given to a substance that contains carbon and that evaporates or “off-gases” at room temperature. Automobiles and other gasoline powered engines are a major source of VOC emissions. Some examples of VOCs include benzene, methylene chloride, hexane, toluene, trichloroethane, styrene, heptane, and perchloroethylene. Biologically generated VOCs or Green Leaf Volatiles (GLVs) such as myrcene and isoprene are also included.



OZONE DEPLETION

Ozone Layer

The Earth's atmosphere is composed of several layers. The lowest layer, the troposphere, extends from the Earth's surface up to about 6 miles or 10 kilometers (km) in altitude. Virtually all human activities occur in the troposphere. Mt. Everest, the tallest mountain on the planet, is only about 5.6 miles (9 km) high. The next layer, the stratosphere, continues from 6 miles (10 km) to about 31 miles (50 km). Most commercial airplanes fly in the lower part of the stratosphere.

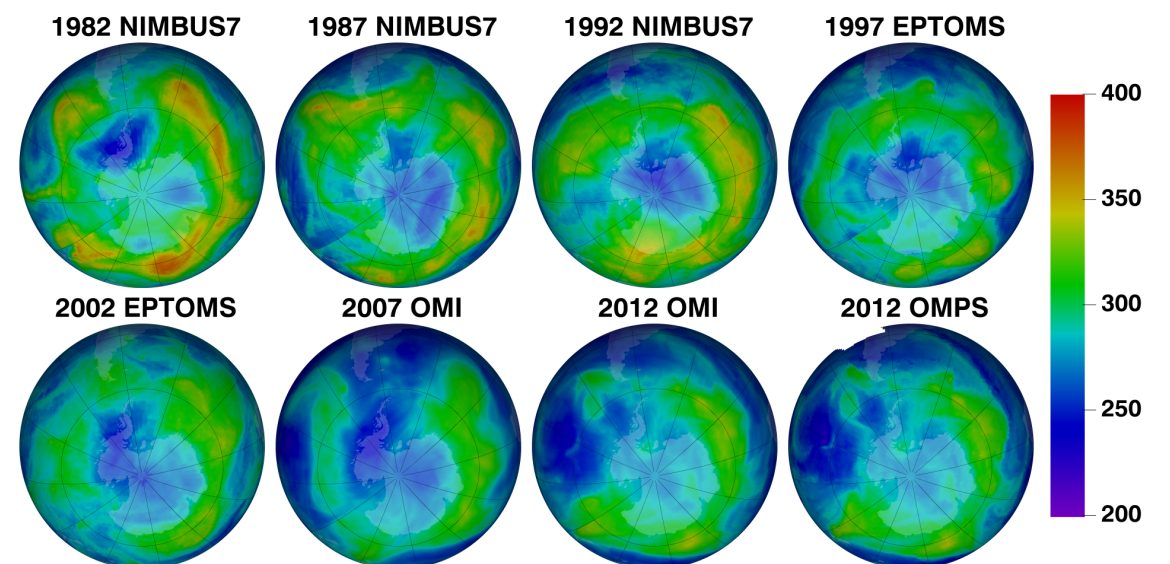


Miles above the surface of the Earth, a thin layer of ozone gas acts as a shield that protects us from harmful ultraviolet light. **Source: NASA**

Ozone Depletion

One chlorine atom can destroy over 100,000 ozone molecules before it is removed from the stratosphere. Ozone can be destroyed more quickly than it is naturally created.

One example of ozone depletion is the annual ozone “hole” over Antarctica that has occurred during the Antarctic spring since the early 1980s. This is not really a hole through the ozone layer, but rather a large area of the stratosphere with extremely low amounts of ozone.



The above image shows the thickness of the Earth's ozone layer on January 27th from 1982 to 2012. This atmospheric layer protects Earth from dangerous levels of solar ultraviolet radiation. The thickness is measured in Dobson units, in this image, smaller amounts of overhead ozone are shown in blue, while larger amounts are shown in orange and yellow. **Source: NASA/NOAA**

HEALTH & ENVIRONMENTAL EFFECTS

UV Protection by the Ozone Layer

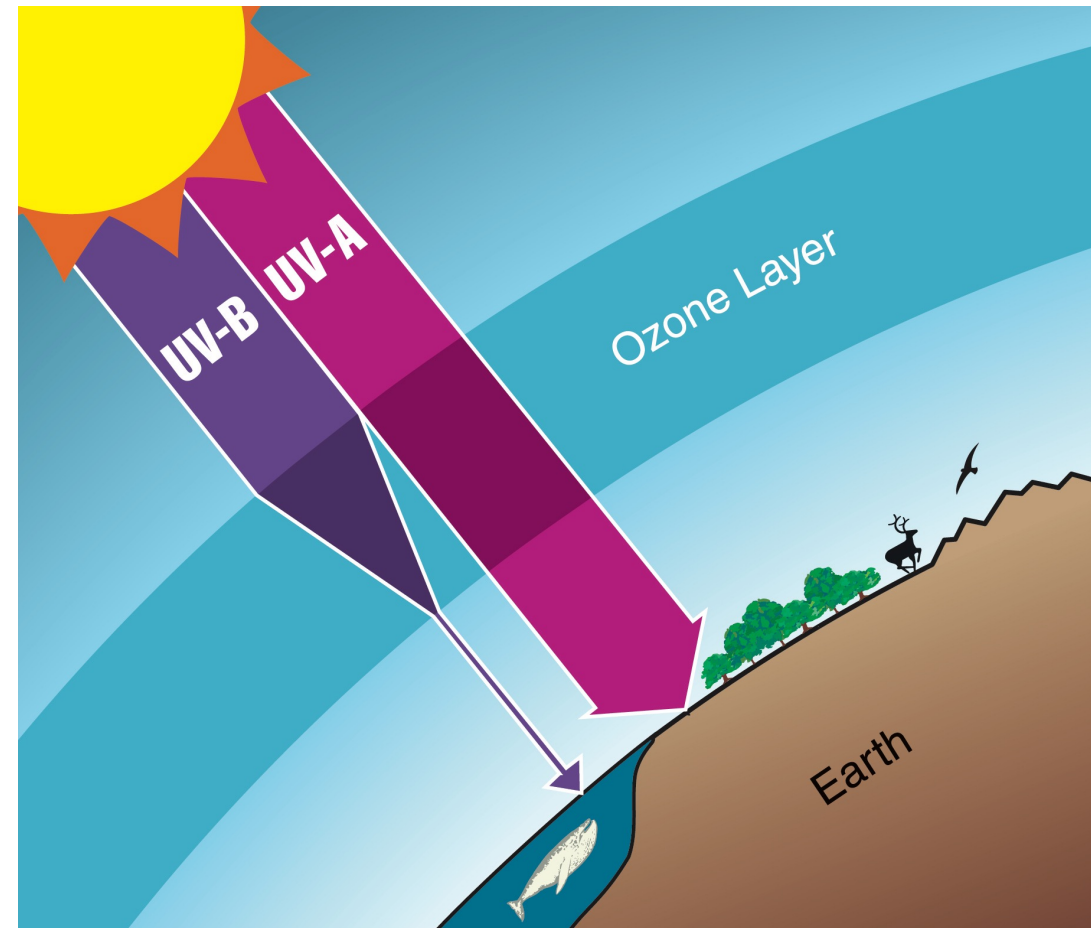
The ozone layer resides in the stratosphere and surrounds the entire Earth. UV-B radiation from the Sun is strongly absorbed in this layer. As a result, the amount of UV-B reaching Earth's surface is greatly reduced. UV-A, visible light, and other solar radiation are not strongly absorbed by the ozone layer. Human exposure to UV-B radiation increases the risks of skin cancer, cataracts, and a suppressed immune system. UV-B radiation exposure can also damage terrestrial plant life, single cell organisms, and aquatic ecosystems.

Ozone Layer Depletion & UV-B Radiation

Reduced ozone levels as a result of ozone depletion mean less protection from the sun's rays and more exposure to UVB radiation at the Earth's surface.

Effects on Human Health

Ozone layer depletion increases the amount of UVB that reaches the Earth's surface. Laboratory and epidemiological studies demonstrate that UVB causes non-melanoma skin cancer and plays a major role in malignant melanoma development. In addition, UVB has been linked to the development of cataracts, a clouding of the eye's lens.



Source: Figure Q3-1 from Michaela I. Hegglin (Lead Author), David W. Fahey, Mack McFarland, Stephen A. Montzka, and Eric R. Nash, Twenty Questions and Answers About the Ozone Layer: 2014 Update, Scientific Assessment of Ozone Depletion: 2014, 84 pp., World Meteorological Organization, Geneva, Switzerland, 2015.

LOUISIANA OZONE STATUS

Currently, there is no air monitor in or near the Alexandria Urbanized Area. As a result, EPA's Air Quality System (AQS) in Monroe, Louisiana, is currently used as a comparable site to estimate local ozone status.

Impacts of Revised Ozone Standard

Designations and Classifications

(Based on 8-Hour Ozone Design Values)

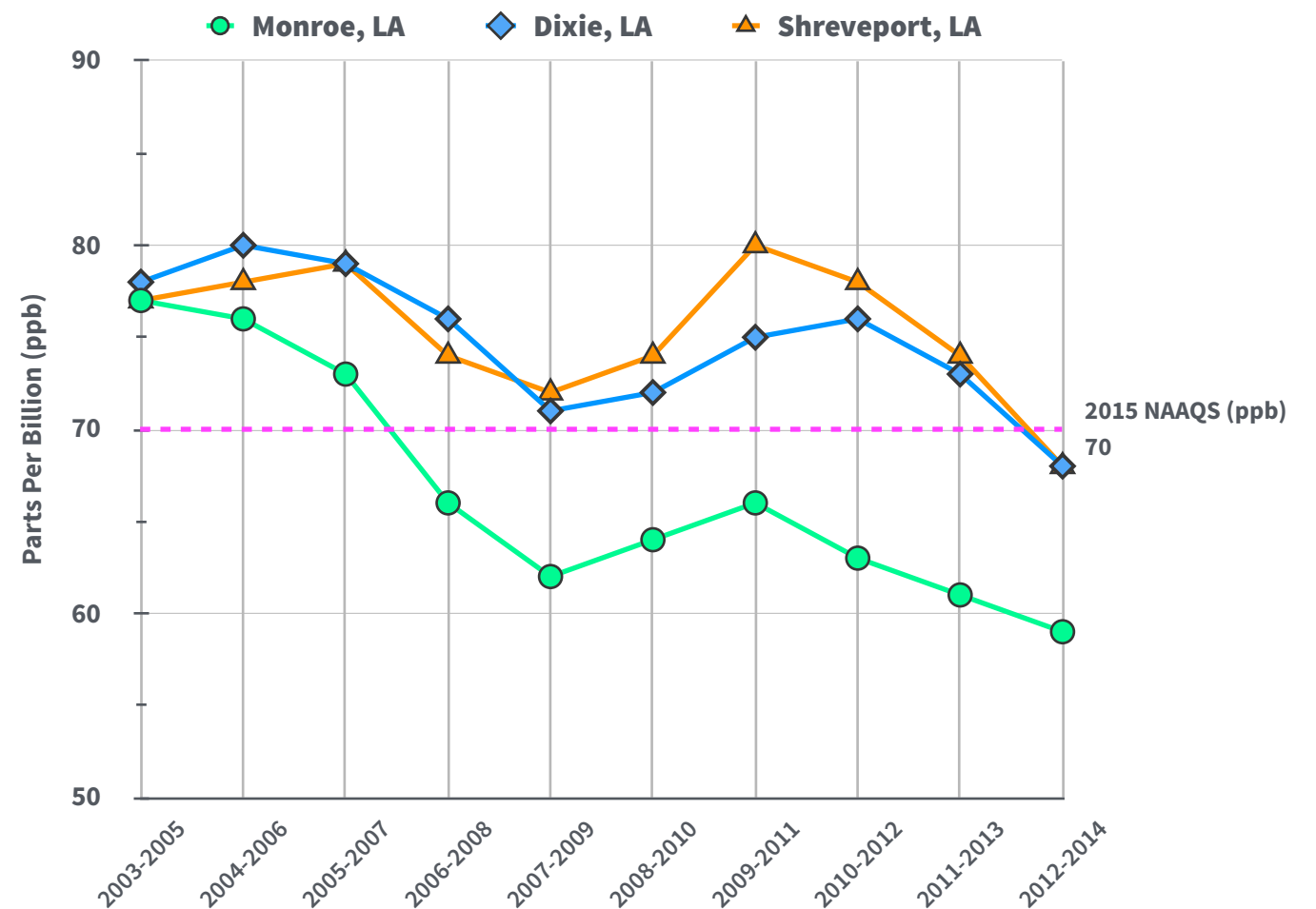
MSA	70 (ppb)	65 (ppb)	60 (ppb)
New Orleans-Metairie-Kenner	NA	NA	NA
Baton Rouge	NA	NA	NA
Shreveport-Bossier City	A	NA	NA
Lafayette	A	NA	NA
Houma-Bayou Cane-Thibodaux	A	NA	NA
Lake Charles	A	NA	NA
Monroe	A	A	A
Alexandria	NM	NM	NM

NOTE: A=Attainment; NA=Non-attainment; NM=Not Monitored

1. Revised 8-hour ozone NAAQS as of October 1, 2015, is 70 parts per billion (ppb). The design value is the 3-year average of the annual 4th highest daily maximum 8-hour ozone concentration. Monitors with design values less than or equal to 0.070 ppm must have 75% annual data capture and 90% 3-year average data capture in order to be considered valid.
2. The design values shown here are computed using Federal Reference Method or equivalent data reported by State, Tribal, and Local monitoring agencies to EPA's Air Quality System (AQS) as of July 16, 2015. Concentrations flagged by State, Tribal, or Local monitoring agencies as having been affected by an exceptional event (e.g., wildfire, volcanic eruption) and concurred by the associated EPA Regional Office are not included in these calculations.

North Louisiana Air Monitor Trends 2003-2014

Monitor Level Design Values for the 8-Hour Ozone NAAQS



SOURCE: EPA 2015 Air Quality System (AQS)



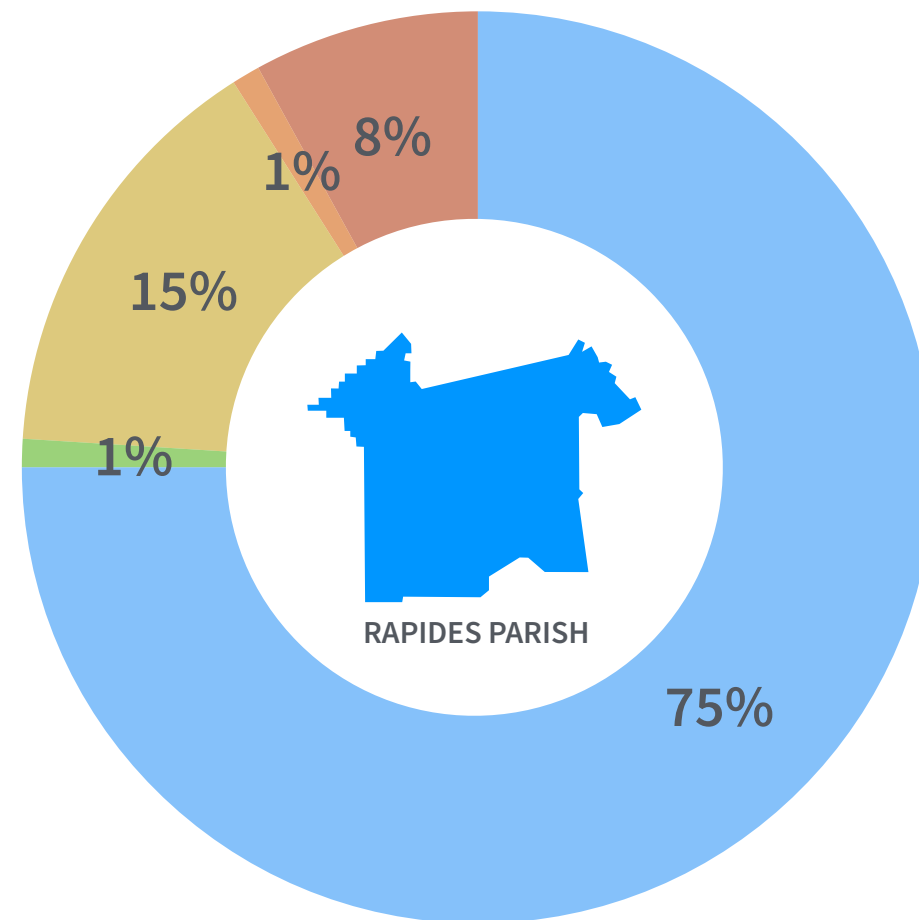
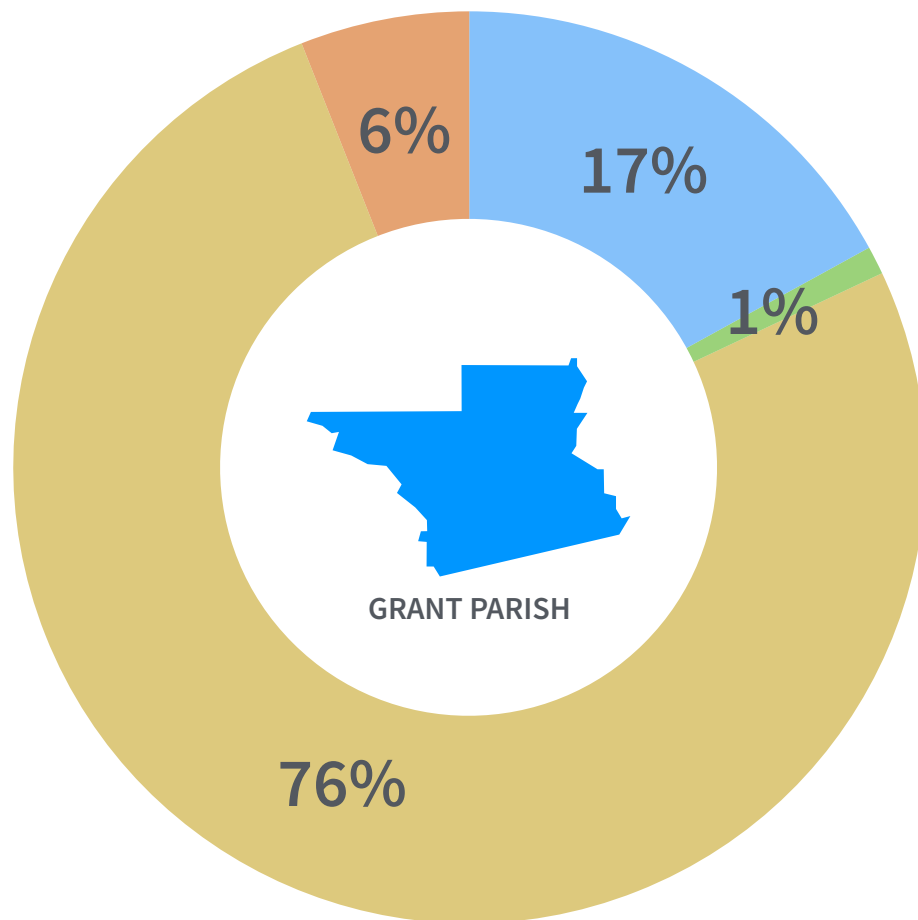
SOURCES OF OZONE PRECURSORS

The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of air emissions of both Criteria and Hazardous air pollutants from all air emissions sources. The NEI is prepared every three years by the EPA based primarily upon emission estimates and emission model inputs provided by State, Local and Tribal air agencies for sources in their jurisdictions, and supplemented by data developed by the EPA. The Ozone Advance Program focuses on nitrogen oxides (NOx) and volatile organic compound (VOC) emissions; the two main precursors of ozone formation. NOx and VOC emissions are described according to source categories:

- **Onroad Mobile Sources** include motorized vehicles that are normally operated on public roadways for transportation of passengers or freight. This includes passenger cars, motorcycles, minivans, sport-utility vehicles, light-duty trucks, heavy-duty trucks and buses.
- **Nonroad Mobile Sources** include aircraft, locomotives and other nonroad engines and equipment such as lawn and garden equipment, construction equipment, engines used in recreational activities and portable industrial, commercial and agricultural engines.
- **Nonpoint Sources** include any stationary sources not required to have emission permits. The term refers to smaller and more diffuse sources within a relatively small geographic area.
- **Point Sources** include large, stationary emissions sources that can be located on a map.



Local Contributors | NITROGEN OXIDE (NO_x)

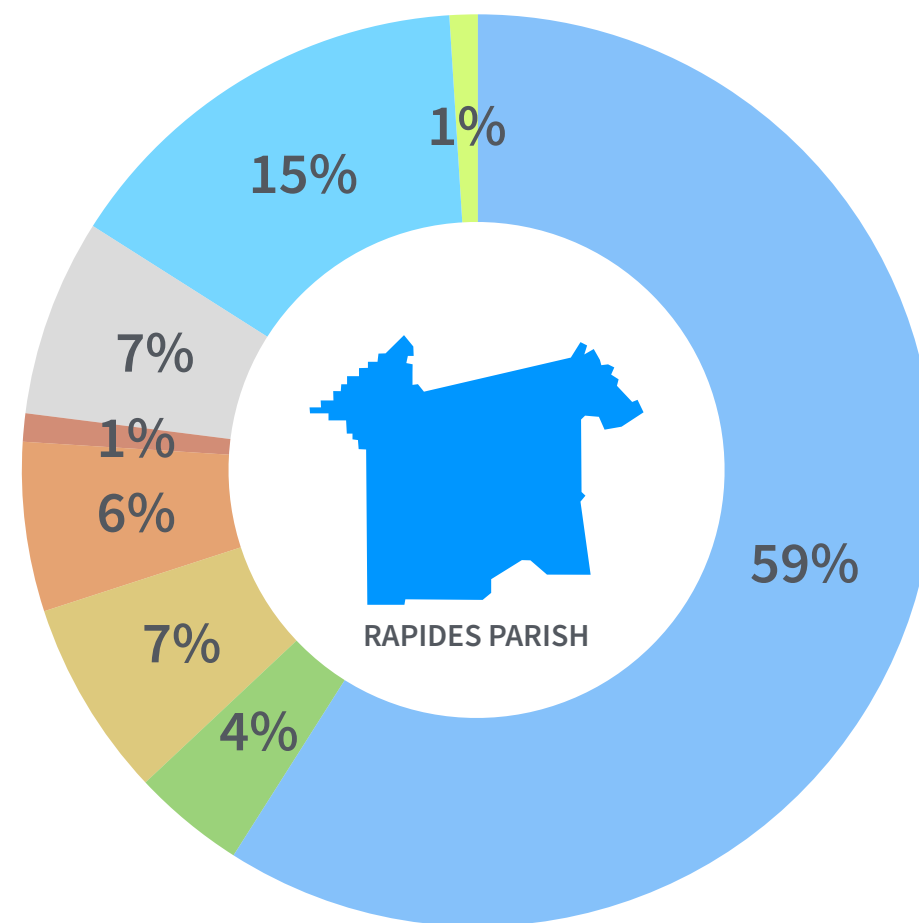
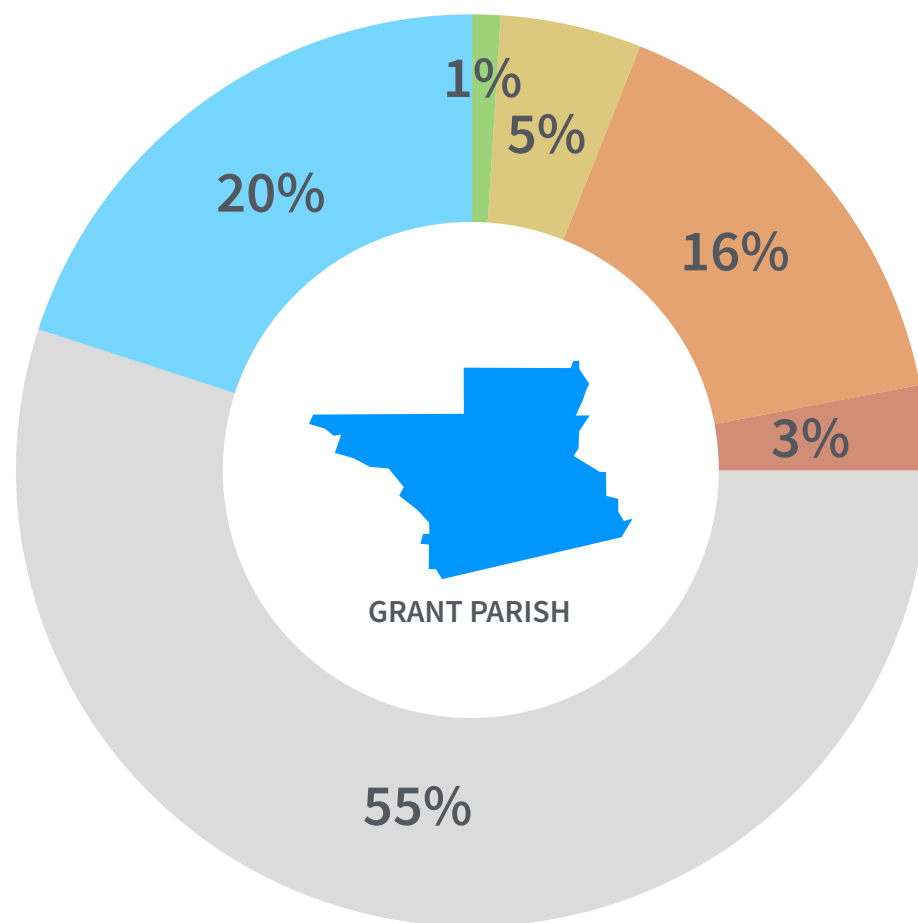


● Fuel Combustion
 ● Waste Disposal
 ● Mobile
 ● Industrial Processes
 ● Fires

SOURCE: EPA 2011 National Emissions Inventory (NEI)



Local Contributors | VOLATILE ORGANIC COMPOUNDS



Fires

Non-Industrial NEC

Fuel Combustion

Mobile

Gas Stations

Solvents

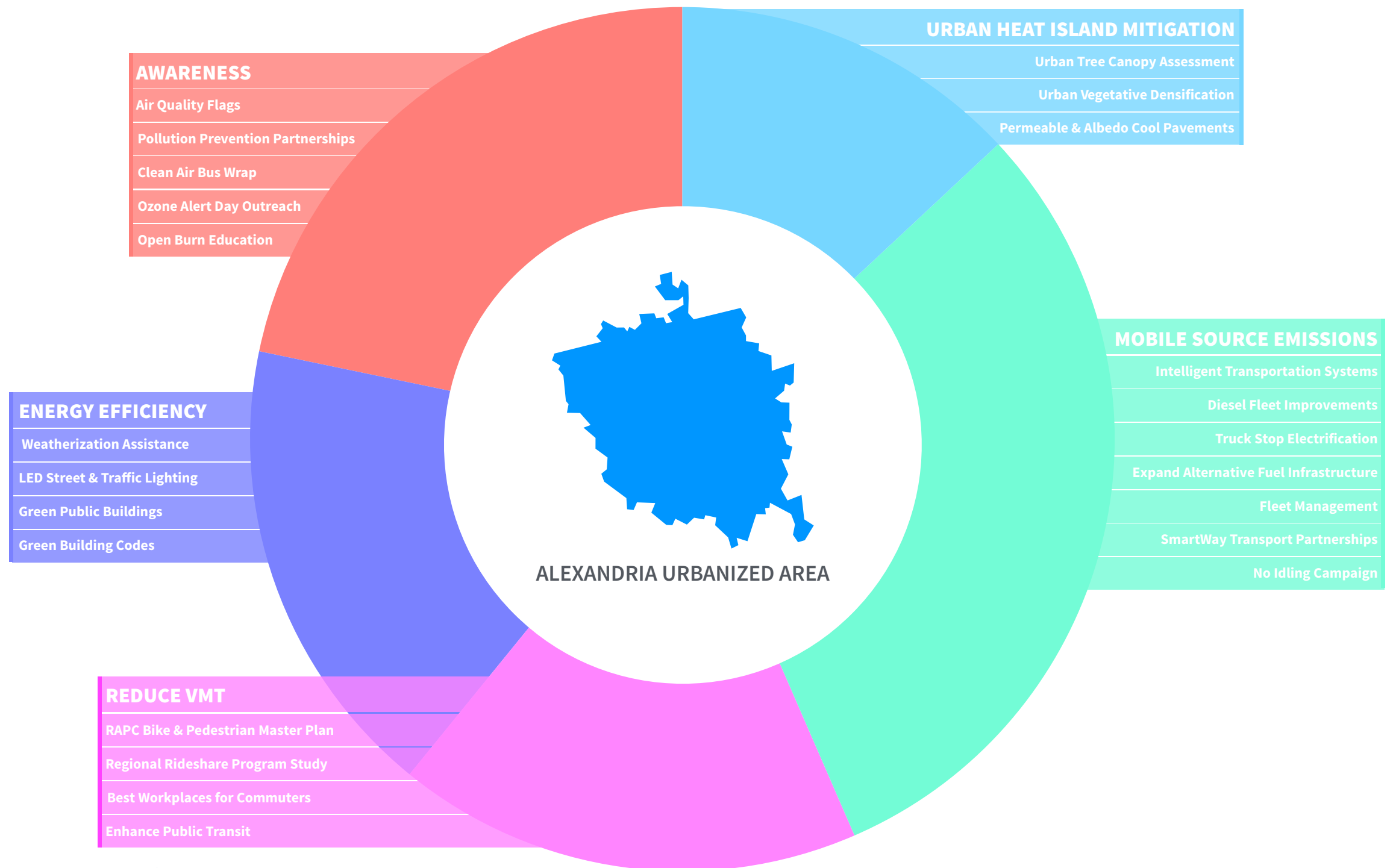
Industrial Processes

Waste Disposal

SOURCE: EPA 2011 National Emissions Inventory (NEI)



VOLUNTARY REDUCTION MEASURES



URBAN HEAT ISLAND MITIGATION

Urban Tree Canopy Assessment

Urban Tree Canopy Densification

Permeable & Albedo Cool Pavements

Project	Description	Performance Measure
Urban Tree Canopy Assessment	Use aerial photographs and satellite imagery with geographic information systems (GIS) data to understand the existing regional UTC, identify threats and environmental pressures that may influence existing UTC, and target areas to receive tree planting financial assistance to increase UTC.	Study results, amount and location of tree cover, a model that predicts effective control measures, established tree canopy goals
Urban Tree Canopy Densification	Add vegetation areas with little plant cover to provide cooling gains. Encourage efforts that increase vegetation density within the urban area.	Percentage increase of urban tree canopy (UTC) and green space density; number of plantings
Permeable & High-albedo Cool Pavements	Encourage the use of high-albedo cool and permeable pavements that allow water infiltration and filter polluted runoff and reflect more solar radiation.	Surface area of high-albedo and permeable materials used sidewalks, streets, parking lots



MOBILE SOURCE EMISSIONS

Intelligent Transportation Systems

Diesel Fleet Improvements

Truck Stop Electrification

Fleet Management

Sponsor SmartWay Transport Partnerships

No Idling Campaign

Project	Description	Performance Measure
Intelligent Transportation Systems	Work with LADOTD and local traffic management entities to deploy Intelligent Transportation System elements to help manage traffic within the Alexandria Urbanized Area. RAPC will seek funds to synchronize traffic signals, improve intersections, expand Roadside Communications (RS-TC), and develop a Transit Management Center (TR).	Additional technologies installed – signs, adaptive signals, cameras; traffic signals synchronized
Clean Diesel Transit	Partner with Alexandria Transit and Rapides Parish School Board, to help identify and obtain rebate incentives to implement strategic diesel emission reduction projects using EPA's National Clean Diesel funding as available.	Number of Clean Diesel Program projects; tons of NOx and VOCs saved due to new equipment or technology
Truck Stop Electrification	Work with the private sector to increase the number of electrified parking spaces (EPS) that allow truck drivers to power necessary systems, such as heating, air conditioning, or appliances, without idling the engine.	Number of EPS installed; tons of NOx and VOCs saved due to new equipment or technology
Fleet Management	Implement efforts to better manage the overall requirements of private and public sector fleets to lower fuel consumption and emissions. Install automated Information Modules, AVL, and GPS modules to provide information to aid in minimizing emissions and to generate information to identify and minimize unnecessary idling of vehicles. This strategy reduces NOx emissions.	Number of modules installed; tons of NOx and VOCs saved due to new equipment or technology
SmartWay	Encourage private-sector participation in the SmartWay program to accelerate the availability, adoption and market penetration of advanced fuel efficient technologies and operational practices in the freight supply chain, while helping companies save fuel, lower costs and reduce adverse environmental impacts.	Number of local participants in SmartWay Transport Partnerships program
No-Idling Campaign	Promote and establish no idling policies and educational programs for local governments, businesses, school districts, individuals and agriculture. May include educational presentations (live or via webcast) or contests for participation.	Number of businesses and agencies that adopt no idling policies; number of vehicles affected by no idling policies



REDUCE VMT

RAPC Bike & Pedestrian Master Plan

Regional Rideshare Program Study

Sponsor Best Workplaces for Commuters

Enhance Public Transit

Project	Description	Performance Measure
RAPC Bike & Pedestrian Master Plan	A planning guide for Rapides Parish and city projects that make it easier, safer and more convenient to get around on a bicycle or on foot. The plan guides the provision of bicycle and pedestrian related infrastructure, policies and programs.	Miles of new walkways (on- and off- street); Number of pedestrian friendly infrastructure improvements; number of pedestrians counted during annual count; miles of new bikeways (on- and off-street); number of riders counted in annual bike count
Regional Rideshare Program Study	Investigate area-wide ridesharing and incentive program implemented by major employers in the urban area.	Study results; number of businesses willing to implement ridesharing; number of employees willing to participate in ridesharing
Best Workplaces for Commuters	Encourage local major employers to participate in Best Workplaces for Commuters, a partnership of U.S. EPA and the National Center for Transit Research.	Number of local participants in Best Workplaces for Commuters
Enhance Public Transit	Work with Alexandria Transit to introduce new initiatives that facilitate increased ridership, such as a mobile website, transit pass program, and smart phone app to track real-time bus arrivals.	Number of bus riders during Free Fares Week; number of individuals riding the bus overall



ENERGY EFFICIENCY

Weatherization Assistance

Install LED Street & Traffic Lighting

Green Public Buildings

Green Building Codes

Project	Description	Performance Measure
Weatherization Assistance	Work with local governments and nonprofit agencies to provide weatherization services to those in need using the latest technologies for home energy upgrades. Services consist of cost-effective energy efficiency measures for existing residential and multifamily housing with low-income residents.	Number of low-income households weatherized; number of residents per household; energy saved due to new equipment or technology
LED Street & Traffic Lighting	Work with LADOTD and local traffic management entities to convert street and traffic lights to LED. Immediate benefits will include reduction in energy consumption and reduction in service trips/vehicle usage.	Number of lights replaced; estimated avoided electricity consumption (kWh)
Green Public Buildings	Through moderate general fund appropriations, retrofit public buildings for more energy efficient lighting, HVAC units and motors, purchase energy star rated appliances and further reduce energy consumption. This reduces the regional demand for electricity and the amount of fossil fuel burning required for power generation.	Number of units retrofitted; sq. ft. of space retrofitted; energy saved due to new equipment or technology; tons of HVAC equipment installed; expected savings
Green Building Codes	Work with local governments to encourage their adoption of energy efficiency measures that improve building energy efficiency in commercial and residential construction. This will lower NOX emissions by reduction of energy consumption.	Number of adopted codes that establish voluntary or mandatory environmentally friendly construction



AWARENESS

Air Quality Flags

Pollution Prevention Partnerships

Clean Air Bus Wrap

Ozone Alert Day Outreach

Open Burn Education

Project	Description	Performance Measure
Air Quality Flags	Air Quality Awareness “Flags” to increase public and business community recognition of the Air Quality Index rating system to highlight the need to take responsible measures to control air pollution during periods when local air quality is degraded.	Number of participating flag programs; AQ flag kits distributed to business and schools
Pollution Prevention Partnerships	Public/private partnerships assisting employers in reducing emissions through a variety of strategies, while promoting their clean air success stories to the community. Common strategies include employee commute solutions programs (encouraging transit use, vanpooling, carpooling, teleworking, biking, walking , flexible schedules), and increased adoption of ozone best practices by employees through workplace education and incentive programs.	Number of partnerships established; number and type of actions taken by partners.
Clean Air Bus Wrap	RAPC will work with RPSB and ATRANS to place AQ Bus Wraps on Public Transit and School Buses as moving billboards promoting AQ awareness.	Number of school and transit buses wrapped; route miles travelled and ridership
Ozone Alert Day Outreach	Education and outreach campaign for Ozone Alert Days throughout the urban area to increase awareness of Ozone Alert Days and participation in the behavior changes that reduce ozone-forming emissions.	Number of users of the Ozone Alert system; number of acres not mowed on Ozone Alert Days as reported by local governments
Open Burn Education	Provide information and education to individuals or commercial businesses regarding regulations and air quality Best Management Practices for open burning.	Number of open burn applications approved; number of burn sites inspected; number of burning violations reported



STAKEHOLDER ENGAGEMENT



This is a blueprint for obtaining stakeholder and public input on the development of an air quality plan for the Alexandria Urbanized Area under the Ozone Advance Program. The plan outlines the goals for stakeholder and public involvement, defines audiences, identifies strategies and tactics for achieving the goals, and defines potential roles and responsibilities in executing this plan.



STAKEHOLDER ENGAGEMENT

Strategies

- ▶ Maximize the use of online resources to remove barriers
- ▶ Seek opportunities to deliver presentations and solicit input
- ▶ Leverage existing resources and means of communication

Key Message

The stakeholder and public involvement effort will center on a core theme that the entire region is affected by ozone and that everyone's help is needed to maintain compliance with federal ozone standards. For jurisdictions and business/industry stakeholders, the emphasis will be how “greening” activities benefit business. For school districts and individuals and community groups concerned with high levels of ozone, the emphasis will be on ensuring that they have an opportunity to express how they are affected by ozone and what kinds of efforts they would like to see the region undertake.

Goals

- ▶ Gain actionable input from diverse stakeholders and the public in the UZA that can be incorporated into the process for selecting ozone emission reduction strategies for the region.
- ▶ Increase community awareness concerning the health effects of ground-level ozone and encourage individuals to take steps to improve the region's air quality.
- ▶ Build relationships with key stakeholders to secure commitments for emission reduction measures to include in the plan and to ensure robust implementation of the plan and ongoing input on the plan following its adoption.

Audiences

- ▶ Entities & Jurisdictions in the Alexandria Urban Area
- ▶ Groups Interested in Public Health and the Environment
- ▶ Businesses and Business Groups
- ▶ Transportation Agencies
- ▶ Other Entities Impacting or Impacted by Ozone Pollution



STAKEHOLDER ENGAGEMENT

Tactics	Description
Finalize a Stakeholder List	A key first step in the stakeholder and public involvement process is the development of a list of stakeholders contacted as part of the outreach effort. The stakeholder list will identify what type of stake the stakeholder has in the region's ozone planning efforts, as well as how and when that stakeholder should be reached.
Meet with Community, Environmental, Business, and Other Groups	Staff and other representatives involved in outreach will identify regularly scheduled meetings held by these organizations and entities, such as meetings of school boards, trade associations, and neighborhood associations, and request time on an agenda to present on the Ozone Advance program and solicit input.
Facilitate Online Participation	Staff will set up web-based tools to provide input, similar to the tools RAPC used to solicit input during their comprehensive resiliency planning involvement process. Another opportunity for participation will be the RAPC website, which an AQ webpage will be added in conjunction with this effort. These tools will allow stakeholders and members of the public to submit detailed written comments on control measures. Staff and others involved in the effort will make sure to collect contact information for anyone wanting more information and will regularly coordinate coverage of these meetings to ensure the most efficient use of limited time.
Conduct Presentations at City Council and Parish Jury Meetings	Staff from either each individual jurisdiction or RAPC will provide presentations to City Council and Parish Jury meetings at some point in the process once input from the public and other stakeholders has been developed. Since the elected officials are themselves stakeholders, it will be important to solicit their feedback on these measures and answer any questions they may have about the Ozone Advance program.
Coordinate Special Stakeholder Meetings	For stakeholders that were not able to participate through other channels that staff feel are particularly important to get input from, staff will set up individual meetings to solicit input. Staff will maintain a stakeholder list throughout the process and develop a priority list of groups or stakeholders to meet with once the other steps have been completed.
Publicize Opportunities for Stakeholder and Public Input	Staff will maximize media outreach and partner communication channels to promote opportunities for input, create buzz and encourage support for the planning process. Media outreach includes pitching stories; securing calendar placements; and potentially arranging media briefings, media interviews, editorial-board visits, letters to the editor and op-eds. Tactics also will include use of existing partner channels such as social media, e-newsletters, billing inserts, web pages, events and hard-copy publications that already reach target audiences.

Input from key community, environmental, business, and other groups and entities will be an important part of the stakeholder outreach process, and having a physical presence at their meetings will be an important way to gain their input.

CONCLUSION

Ozone pollution is a serious public health issue and an environmental problem. RAPC is committed to improving air quality in the Alexandria Urbanized Area through voluntary actions and reasonable, effective regulatory action. In addition to awareness and outreach, it includes voluntary measures that help improve efficiency of traffic flows, but also help public and private organizations save costs while helping the area combat air quality concerns.

Effective solutions to these challenges will continue to stem from RAPC's strong partnerships with local governments, residents, and businesses to maintain a strong commitment to both economic growth and environmental quality. RAPC seeks to create a program that not only supports and develops innovative solutions to the area's air quality challenges and reduces ozone precursors, but also integrates into existing area projects and future programming. This mix will allow for more expeditious implementation and provide flexibility for program stakeholders.

RAPC's Air Quality Initiative is a living document and will be updated as strategies are added and the program evolves.

