OZONE ADVANCE PROGRAM ACTION PLAN 2019

FAYETTEVILLE METROPOLITAN PLANNING AREA

A JOINT EFFORT BY UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4, NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY AND THE CUMBERLAND COUNTY BOARD OF COMMISSIONERS, TOWN OF FALCON, CITY OF FAYETTEVILLE, FORT BRAGG MILITARY RESERVATION, TOWN OF GODWIN, TOWN OF HOPE MILLS, TOWN OF LINDEN, TOWN OF SPRING LAKE, TOWN OF STEDMAN AND TOWN OF WADE AND THE FAYETTEVILLE AREA METROPOLITAN PLANNING ORGANIZATION

DECEMBER 15, 2019

TABLE OF CONTENTS

1. PURPOSE OF THE OZONE ADVANCE PROGRAM

1.0 Introduction ..... page 4
1.1 Background and Stakeholder Involvement ..... page 4
1.2 Regional Characteristics ..... page 5
1.3 Local Efforts ..... page 7

2. OVERVIEW OF AIR QUALITY IN CUMBERLAND COUNTY

2.0 Air Quality Monitoring in Cumberland County ..... page 10

3. OZONE HEALTH EFFECTS AND SOURCES

3.0 Overview of Ozone ..... page 14
3.1 Ozone Health Effects ..... page 14
3.2 Ozone Sources ..... page 15
3.2.1 Volatile Organic Compounds ..... page 15
3.2.2 Nitrogen Oxides ..... page 15
3.2.3 VOCs and NO_X ..... page 15

4. CONTROL MEASURES

Transportation ..... page 18
Land Use ..... page 19
Energy Reduction ..... page 20
Awareness ..... page 22

FIGURES AND TABLES

Figure 1: Map of FAMPO Region and Cumberland County ..... page 6
Figure 2: Map of Ozone Monitor Locations ..... page 10

Table 1: Census 2010 Demographic Information ..... page 6
Table 2: Summary of 4th Highest Eight-Hour Ozone Values ..... page 11
Table 3: Number of Exceedance Days ..... page 11
Table 4: Summary of Design Values ..... page 11
Table 5: Cumberland County Emissions Estimates ..... page 16

SECTION 1
PURPOSE OF THE OZONE ADVANCE PROGRAM

1. PURPOSE OF THE OZONE ADVANCE PROGRAM

1.0 INTRODUCTION

The Ozone Advance (OA) program is a collaborative effort between the United States Environmental Protection Agency (EPA), states, tribes and local governments. The program encourages expeditious emissions reductions in ozone attainment areas to help these areas continue to meet the National Ambient Air Quality Standards (NAAQS) for ground-level ozone.

Specifically, the OA program will:

- help attainment areas reduce emissions to ensure continued health protection,
- better position areas to remain in attainment, and
- efficiently direct available resources toward actions to address ozone problems quickly.

The OA program promotes local actions to reduce ozone precursors in attainment areas to help these areas continue to maintain the ozone NAAQS. The program encourages states, tribes and local governments to take proactive steps to keep their air clean.

The OA program is distinct from the former Early Action Compact program in that it focuses on attainment areas, and it does not provide regulatory flexibility in the form of deferred designations or otherwise. The programs are similar, however, in terms of their encouragement of early actions to reduce ozone precursors and their development of stakeholder groups.

1.1 BACKGROUND AND STAKEHOLDERS INVOLVEMENT

The Clean Air Act (CAA), as amended in 1990, is the most recent version of a law first passed in 1970. The 1990 amendment made some major changes in the CAA, by empowering the EPA to establish permitting and enforcing programs for larger sources that release pollutants into the air.

On July 17, 1997, the EPA promulgated revised NAAQS, addressing changes in the ozone standard and moving from a one-hour standard to an eight-hour standard, as longer exposure to ozone had been proven to have a significant impact on people and the environment. The new primary and secondary standards were set to 0.08 parts per million (ppm) for ground-level ozone.

In 2002, the EPA proposed a new program, the Early Action Compact (EAC), to areas in the country that would meet certain criteria. Each participating area was to have an EAC Memorandum of Agreement signed by December 31, 2002. The Chairman of the Cumberland County Board of Commissioners originally signed the EAC Memorandum of Agreement on December 13, 2002. The Early Action Plan, a document outlining local, state and federal strategies to reduce ozone precursors, followed. Cumberland County met the milestones set by the EPA, resulting in the county's designation as an Ozone Attainment Area in April 2008.

Ground-level ozone standards were changed once more in 2008 to 0.075 ppm, and they were updated again in 2015 to 0.070 ppm. Cumberland County elected to continue with the air quality regional efforts in the hope that uninterrupted work would further the ozone precursors reduction. The Cumberland County Air Quality Stakeholders Committee was formed as a part of the EAC and met monthly to discuss and implement air quality improvement strategies.

As a former EAC region, this area decided that participation in the OA program was advantageous, and the Cumberland County Board of Commissioners approved participation in the OA program to continue the efforts initiated in 2002. Chairman W. Marshall Faircloth signed the letter of interest on September 4, 2012. Each municipality within Cumberland County signed a resolution of support and commitment to participate in the OA program in 2013. All municipalities, including Cumberland County, were approached in early 2017 to commit to supporting Ozone Advance again, this time with the updated standard. The city of Fayetteville, Town of Hope Mills, Town of Spring Lake, Town of Eastover, and Town of Wade each passed resolutions of commitment.

The Air Quality Stakeholders Committee underwent major organizational changes beginning in 2016. These changes began with revising the by-laws in early 2016. During 2016 and into early 2017 the stakeholders were moved from a committee under the jurisdiction of Cumberland County to a committee of Fayetteville Area Metropolitan Planning Organization (FAMPO). The jurisdictional change resulted in an expanded coverage area for the stakeholder group and extended the term limits of the Air Quality Stakeholders Committee members. The stakeholder group now includes all areas of the FAMPO service area and all communities in Cumberland County. Under FAMPO, there are no term limits for members. The stakeholders adopted a new name, The Fayetteville Planning Area Air Quality Stakeholders, and by-laws in 2017.

The Air Quality Stakeholders Committee was previously supported by the Combined Air Team (CombAT) that included members of Cumberland County, City of Fayetteville, Fayetteville State University, Fayetteville Public Works Commission,cFayetteville Area System of Transit (FAST) and the Fort Bragg Air Team.These members were listed as air quality stakeholders, as they meet regularly with their fellow stakeholders. Some previous members of CombAT are on call to provide The Fayetteville Planning Area Air Quality Stakeholders with technical information and administrative assistance.

Public involvement does not end with the stakeholders committee. An aggressive process of education and outreach into the community has been documented since the beginning of this endeavor, to include involvement of area public school systems (Cumberland County and Fort Bragg), utility providers, the Plant Managers Association and any organization requesting presentations. A website, maintained by FAMPO staff, provides information on the local efforts and related links (http://fampo.org/air-quality). FAMPO contracts with Sustainable Sandhills, a regional nonprofit organization, to plan and implement air quality relatedprograms. Minutes of the stakeholder meetings and outreach presentations are on file and open to the public.

1.2 REGIONAL CHARACTERISTICS

The new air quality stakeholder region includes the entire FAMPO area and all of Cumberland County (Figure 1 on page 6). FAMPO was established in 1975 by the Federal Surface Transportation Assistance Act of 1973.

Any urbanized area with a population greater than 50,000 was designated as a Metropolitan Planning Organization (MPO). Until 2010, the MPO boundaries included Fayetteville, Hope Mills, Spring Lake, Fort Bragg, Pope Army Air Field, portions ofHarnett County and Cumberland County. Following the 2010 Census, the boundaries were expanded to include portions of Robeson County, including the Town of Parkton, and portions of Hoke County, including the Town of Raeford. The total population of the planning area in 2010 was 372,000.

Cumberland County is a mixture of urban and rural areas. The 2014 Census population for Cumberland County was 326,328. The 2010 Census population for Cumberland County was 319,431, of which 42,702 was located in rural areas and 276,729 was located in urbanized areas. Population density is varied, as shown in Table 1 on page 6. Because of the difference in land use and population densities, care was exercised when proposing and selecting strategies to be implemented by several jurisdictions.

FIGURE 1. MAP OF FAMPO REGION AND CUMBERLAND COUNTY

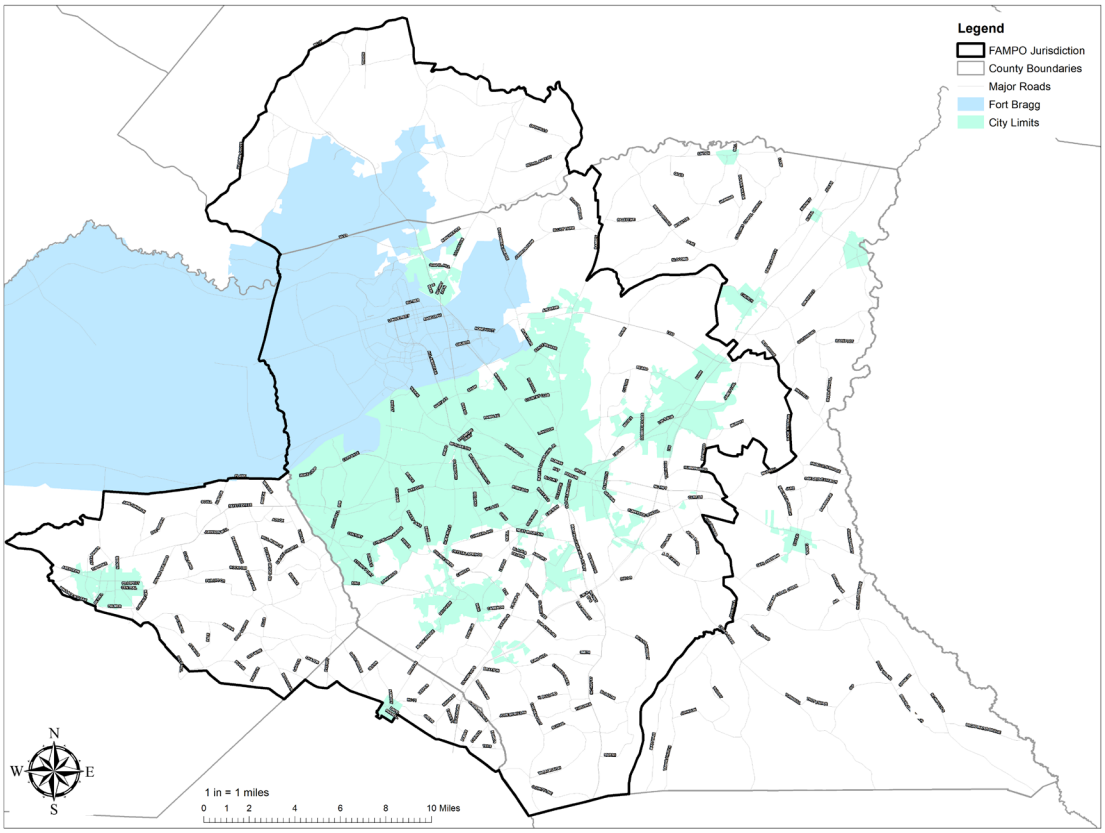

TABLE 1. CENSUS 2010 DEMOGRAPHIC INFORMATION

JURISDICTION	POPULATION	LAND AREA/SQ. MI.	DENSITY/SQ. MI.
Eastover	3,628	11.33	320.3
Falcon (Part)	258	1.21	213.2
Fayetteville	200,564	145.84	1375.2
Godwin	139	0.52	269
Hope Mills	15,176	6.94	2186
Linden	130	0.51	257.2
Spring Lake	11,964	23.06	518.8
Stedman	1,028	2.08	493.9
Wade	556	1.79	311.4
Cumberland County	319,431	652.31	489.7
Parkton	436	0.62	703.23
Raeford	4,611	3.8	1213.42
FAMPO	372,000	656.73	566.42

1.3 LOCAL EFFORTS

In April 2001, neighboring military reservation Fort Bragg began planning and implementing strategies to become a sustainable installation. As part of this effort, several individuals in the surrounding counties began working with the installation to aid in the process, including the planning and implementation schedule of air quality initiatives for the metropolitan statistical area. At that point, building partnerships in support of a sustainable region were the next logical and necessary steps. In partnership with the North Carolina Department of Environment and Natural Resources and stakeholders from the surrounding counties and communities, this partnership evolved into an independent, community-based non-profit organization called Sustainable Sandhills, with the mission to provide education, demonstration and collaboration to preserve the environment of the Sandhills within a six-county region. In 2017, Sustainable Sandhills expanded to include additional counties, bringing the total reach to nine counties.

The local and regional efforts to attain sustainability began prior to the development of the EPA's EAC, demonstrating the commitment of this area to attaining and maintaining healthy environment, now and for generations to come. The Air Quality Stakeholders Committee, Fort Bragg and Sustainable Sandhills participants are working together to ensure a united campaign and to avoid duplicated efforts.

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SECTION 2

OVERVIEW OF AIR QUALITY IN CUMBERLAND COUNTY

2.0 AIR QUALITY MONITORING IN CUMBERLAND COUNTY

The North Carolina Department of Air Quality (NC DAQ) monitors the levels of all criteria pollutants in Cumberland County and reports these levels to the EPA. According to the most recent data, Cumberland County is meeting NAAQS for all the pollutants.

Federal enforcement of the ozone NAAQS is based on a three-year monitor "design value." The design value for each monitor is obtained by averaging the annual fourth highest daily maximum eight-hour ozone values over three consecutive years. If a monitor's design value exceeds the NAAQS, that monitor is in violation of the standard.* The EPA may designate part or all of the metropolitan statistical area (MSA) as non-attainment, even if only one monitor in the MSA violates the NAAQS.

There are two ozone monitors in Cumberland County (Figure 2). One of the monitors is located northeast of Fayetteville (Wade). The other was formerly located in Hope Mills (Golfview) but moved to a new location southeast of Fayetteville (Honeycutt) in Spring 2015 (March/April). Tables 2, 3 and 4 on page 10 show Golfview for historical context. In addition, the tables and graphs include projections for 2019 based on the Ozone Predictor Tool provided by NC DAQ.

*While NAAQS are measured in parts per million (ppm), design values are reported in parts per billion (ppb).

FIGURE 2: MAP OF OZONE MONITOR LOCATIONS

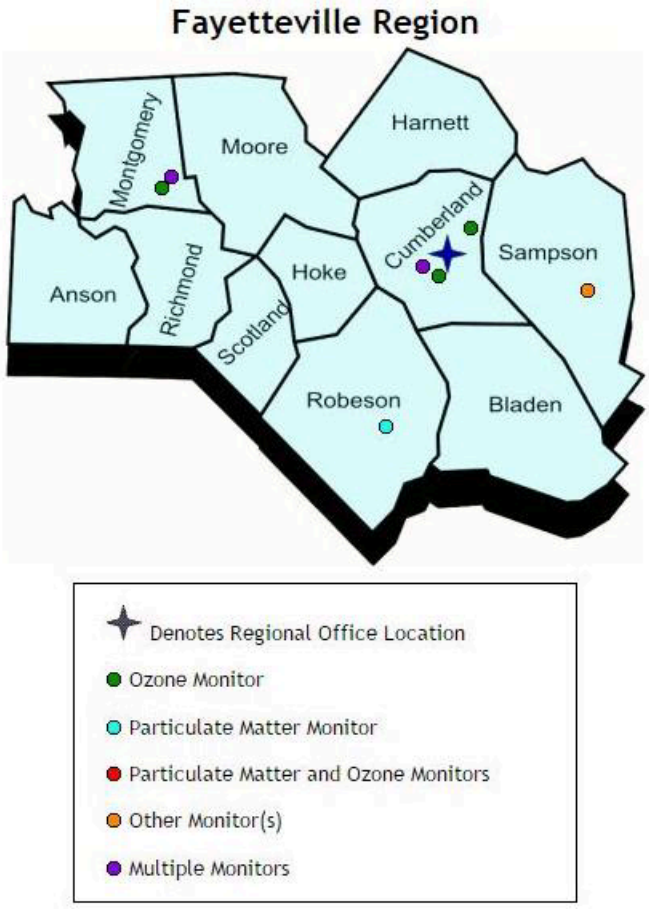

TABLE 2: SUMMARY OF 4TH HIGHEST EIGHT-HOUR OZONE VALUES (PPB)

4TH HIGHEST OZONE VALUES												
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
WADE	75	64	71	73	68	62	61	60	64	63	63	61
HONEYCUTT*	--	--	--	--	--	--	--	62	64	63	63	61
GOLFVIEW*	75	65	73	76	69	62	66	--	--	--	--	--

TABLE 3: SUMMARY OF EXCEEDANCE DAYS

NUMBER OF EXCEEDANCE DAYS											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
WADE	3	0	2	0	1	0	0	0	0	0	0
HONEYCUTT*	--	--	--	--	--	--	--	0	0	0	0
GOLFVIEW*	4	1	2	4	2	0	0	--	--	--	--

* 2007 to 2014 exceedance days based on maximum ozone concentration of > 75 ppb.
* 2015 to 2018 exceedance days based on maximum ozone concentration of > 70 ppb.

TABLE 4: SUMMARY OF DESIGN VALUES (PPB)

VALUES SHADED IN RED EXCEEDED THE NAAQS FOR THOSE YEARS.*

OZONE DESIGN VALUES												
	'05 TO '07	'06 TO '08	'07 TO '09	'08 TO '10	'09 TO '11	'10 TO '12	'11 TO '13	'12 TO '14	'13 TO '15	'14 TO '16	'15 TO '17	'16 TO '18
WADE	78	75	73	70	69	70	67	63	60	64	62	63
HONEYCUTT*	--	--	--	--	--	--	--	--	--	--	63	63
GOLFVIEW*	82	77	74	71	71	72	69	65	63	--	--	--

* 2007 to 2014 Design Values > 75 ppb, 2015 to 2018 Design Values > 70 ppb.

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SECTION 3
OZONE HEALTH EFFECTS AND SOURCES

3.0 OVERVIEW OF OZONE

Ozone (O_3) is a tri-atomic ion of oxygen. In the stratosphere or upper atmosphere, ozone occurs naturally and protects the Earth's surface from ultraviolet radiation. Ozone in the lower atmosphere is often called ground-level ozone, tropospheric ozone or ozone pollution to distinguish it from upper-atmospheric or stratospheric ozone. Ozone does occur naturally in the lower atmosphere (troposphere), but only in relatively low background concentrations of about 0.030 ppm, well below the NAAQS.

The term "smog" is also commonly used to refer to ozone pollution. Although ozone is a component of smog, smog is a combination of ozone and airborne particles having a brownish or dirty appearance. It is possible for ozone levels to be elevated even on clear days with no obvious "smog."

In the lower atmosphere, ozone is formed when airborne chemicals, primarily nitrogen oxides (NOx) and volatile organic compounds (VOCs), combine in a chemical reaction driven by heat and sunlight. These ozone-forming chemicals are called precursors to ozone. Man-made NOx and VOC precursors contribute to ozone concentrations above natural background levels.

Since ozone formation is greatest on hot, sunny days with little wind, elevated ozone concentrations tend to occur during the warm weather months, generally May through September. In agreement with the EPA's guidance, North Carolina operates ozone monitors from April 1 through October 31 to capture high ozone events.

3.1 OZONE HEALTH EFFECTS

The form of oxygen humans needs to breathe is O_2. When we breathe ozone (O_3), it acts as an irritant to our lungs. Short-term, infrequent exposure to ozone can result in throat and eye irritation, difficulty drawing a deep breath and coughing. Long-term and repeated exposure to ozone concentrations above the NAAQS can result in the reduction of lung function as the cells lining the lungs are damaged. Repeated cycles of damage and healing may result in scarring of lung tissue and permanently reduced lung function.

Health studies have indicated that high ambient ozone concentrations may impair lung function growth in children, resulting in reduced lung function into adulthood. In adults, ozone exposure may accelerate the natural decline in lung function that occurs as a part of the normal aging process. Ozone may also aggravate chronic lung diseases such as emphysema and bronchitis and reduce the immune system's ability to fight off bacterial infections in the respiratory system. Asthmatics and other individuals with respiratory disease are especially at risk from elevated ozone concentrations. Ozone can aggravate asthma, increasing the risk of asthma attacks that require a doctor's attention or the use of additional medication. According to the EPA, one reason for this increased risk is that ozone increases susceptibility to allergens, which are the most common triggers for an asthma attack. In addition, asthmatics are more severely affected by the reduced lung function and irritation that ozone causes in the respiratory system. There is increasing evidence that ozone may trigger, not just exacerbate, asthma attacks in some individuals.

All children are at risk from ozone exposure because they often spend a large part of the summer playing outdoors. Their lungs are still developing. They breathe more air per pound of body weight, and they are less likely to notice symptoms. Children and adults who frequently exercise outdoors are particularly vulnerable to ozone's negative health effects because they are repeatedly exposed to elevated ozone concentrations while breathing at an increased respiratory rate.

3.2 OZONE SOURCES

Ozone-forming pollutants or precursors are VOCs and NOx.

3.2.1 VOLATILE ORGANIC COMPOUNDS

VOCs are sometimes referred to as hydrocarbons. In North Carolina, large portions of precursor VOCs are produced by natural, or biogenic, sources – primarily trees*. Man-made or anthropogenic VOCs also contribute to ozone production, particularly in urban areas. Sources of anthropogenic VOCs include unburned gasoline fumes evaporating from gas stations and cars, industrial emissions and consumer products such as paints, solvents and the fragrances in personal care products.

3.2.2 NITROGEN OXIDES

NOx are produced when fuels are burned and result from the reaction of atmospheric nitrogen at the high temperatures produced by burning fuels. Power plants and highway motor vehicles are the major contributors in urban areas, and off-road mobile source equipment (such as construction equipment, lawn care equipment, trains and boats) are the major sources of NOx. Other NOx sources include "area" sources (small, widely-distributed sources) such as fires (forest fires, backyard burning, house fires) and natural gas hot water heaters. Generally, North Carolina, including the Fayetteville area, is considered "NOx-limited" because of the abundance of VOC emissions from biogenic sources. Therefore, current ozone strategies focus on reducing NOx. However, VOC reduction strategies, such as control of evaporative emissions from gas stations and vehicles, could reduce ozone in urban areas where biogenic VOC emissions are not as high.

3.2.3 VOCs AND NOx

The following lists the sources, by category, that contribute to VOC and NOx emissions.

Biogenic: Trees and other natural sources

Mobile: Vehicles traveling on paved roads such as cars, trucks, buses and motorcycles

Non-road: Vehicles not traveling on paved roads such as construction, agricultural and lawn care equipment, motorboats and locomotives

Point: "Smokestack" sources from industries and utilities

Area: Sources not falling into above categories. For VOCs, area sources include gas stations, dry cleaners, print shops and consumer products. For NOx, they include forest and residential fires, natural gas and hot water heaters.

**Biogenic VOCs produced by trees are not as toxic to human health as VOCs emitted by anthropogenic sources. Certain species of trees produce more VOCs than others.*

TABLE 5. CUMBERLAND COUNTY EMISSIONS ESTIMATES (TONS/YEAR)

	POINT		AREA		ON-ROAD		NON-ROAD	
	NO_X	VOC	NO_X	VOC	NO_X	VOC	NO_X	VOC
YEAR								
2007	669	1,078	231	3,925	9,222	4,618	1,575	1,246
2011	379	811	234	2,666	6,415	3,366	808	853
2018	370	808	234	2,666	3,008	1,603	485	620

Data Source: United States Environmental Protection Agency Emissions Inventory

SECTION 4
CONTROL MEASURES

The following list of air quality action strategies indicate several new and ongoing techniques that will be used locally to reduce ozone precursors. Although some are not quantifiable, all of these strategies are directionally correct. As part of the Ozone Advance Program Action Plan, Cumberland County will submit an annual report verifying activities and implementations. Additional strategies may be communicated as they develop.

TRANSPORTATION

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Fayetteville PWC	Alternative Fuel/Hybrid Vehicles	2012	2019
STRATEGY DESCRIPTION: Fayetteville Public Works Commission (PWC) will annually replace existing fleet vehicles and equipment with vehicles and equipment that reduce emissions and lower fuel consumption. In 2014, PWC replaced five heavy, diesel fueled trucks with reduced emissions diesel engine trucks. They replaced eight bucket trucks with two hybrid bucket trucks and six reduced emissions diesel engine bucket trucks. PWC operates five other hybrid cars and sport utility vehicles. PWC also replaced spark ignited, propane forklifts with zero emissions, all electric forklifts and a diesel directional board with a zero emissions, solar powered message board. They also converted construction equipment to equipment compliant with Tier 4 emissions standards , which reduce NO_X emissions.			
UPDATED DESCRIPTION: PWC's ongoing fleet replacement includes hybrid vehicles, electric vehicles and lower emissions vehicles. An electric Chevy Volt sedan was added in 2017 and replaced a sport utility vehicle.			

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Alternative Transportation	2014 2017 first reporting year	2019
STRATEGY DESCRIPTION: FAMPO seeks to increase the amount of alternative transportation options while also improving accessibility to these options. This strategy can include sidewalks, greenways, public transportation and rail.			
UPDATED DESCRIPTION: In 2017, FAMPO awarded $218,181 to public transportation oriented projects through the 5310 Grant Program. The Cumberland County Community Transportation Program received funds to provide public transportation to individuals who live in rural parts of the county but need access to services within the city. Meanwhile, the City of Fayetteville and Town of Spring Lake received funds to build sidewalks that will provide access to destinations as well as transit stops within their communities.			

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Bicycle Connectivity	2017	2019
STRATEGY DESCRIPTION: FAMPO has received a grant from the North Carolina Department of Transportation Bicycle and Pedestrian Division to implement a regional bicycle plan. FAMPO contracted with Alta Planning and Design to develop a plan that will show how bicycling can be a more viable option within an eight county region, including the entire FAMPO region. The plan was completed in the summer of 2019.			

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Congestion Management	2017	2019
STRATEGY DESCRIPTION: FAMPO hired a consulting firm to compile a Congestion Management Plan for the Town of Hope Mills. This was a $149,554 investment to develop strategies - highway and non-highway - for reducing congestion within the Hope Mills town limits. Reduced congestion will lead to less idle time and travel time, reducing the negative effects on air quality within the FAMPO region.			
UPDATED DESCRIPTION: The plan was completed and submitted to the public in 2018. The plan will be implemented over the next several years to reduce congestion in the Hope Mills area.			

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Volkswagen Mitigation Fund Awareness	2017	2019

STRATEGY DESCRIPTION: Sustainable Sandhills has been reaching out to all government entities that qualify for funds in the first phase of the Volkswagen Mitigation Fund distribution. In North Carolina, the fund will be distributed in three phases, with public participation at each level. Sustainable Sandhills has provided quarterly reports to municipalities with air quality stakeholders for the past two years to ensure that those who run local fleets can take advantage of the funds to replace diesel engines with low emissions alternatives.

UPDATED DESCRIPTION: Sustainable Sandhills coordinated with the North Carolina Department of Environmental Quality to share vital information about the Volkswagen Mitigation Fund with the community. Fayetteville Area System of Transit, Cumberland County Solid Waste, Fayetteville Regional Airport and Town of Spring Lake each submitted proposals during Phase I.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
City of Fayetteville	Draft Bicycle Plan	2019	

STRATEGY DESCRIPTION: The City of Fayetteville contracted with Stantec Consulting Services, Inc. and the North Carolina Department of Transportation Integrated Mobility Division to create the Fayetteville 2019 Bicycle Plan. The draft plan is available to the public, and community review sessions are underway.

LAND USE

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills Cumberland County	Carbon Bank	2017	2019

STRATEGY DESCRIPTION: In 2017, Sustainable Sandhills planted about 5,000 longleaf and loblolly pine trees on Cumberland County Schools property. Carbon credits are for sale through Urban Offsets. In addition to providing much needed trees to the area and potential school funding, the tree plots also serve as living learning labs.

UPDATED DESCRIPTION: For 2019, a curriculum developed for high school students will be piloted. Students will learn how to measure trees, calculate carbon sequestered and identify signs of disease and damage.

ENERGY REDUCTION

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Local Food Access Program	2012	2019

STRATEGY DESCRIPTION: Sustainable Sandhills strives to educate the community on the benefits of sourcing food locally, reducing miles traveled by food and consumers. Sustainable Sandhills has built partnerships with the Downtown Restaurant Association, Slow Food Fayetteville in the Sandhills and Sandhills Farm to Table Cooperative.

UPDATED DESCRIPTION: Sustainable Sandhills has ended its partnership with a local community supported agriculture (CSA) cooperative, as regional business models have moved from CSAs in favor of farmers markets. Sustainable Sandhills is focusing on local food by offering periodic seasonal dinners with local chefs who create delicious meals from locally sourced ingredients.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Alternative Transportation	2014 2017 first year reporting	2019

STRATEGY DESCRIPTION: FAMPO strives to increase the amount of alternative transportation options while also improving accessibility to these options. This strategy can include sidewalks, greenways, public transportation and rail. The Sandhills Regional Bicycle Plan was completed in late summer 2019. Plans for a light rail study in partnership with the Capital Area Metropolitan Planning Organization in Raleigh are underway for FY2020.

UPDATED DESCRIPTION: In 2019, FAMPO awarded $344,678 to public transportation oriented projects through the 5310 Grant Program. The Cumberland County Community Transportation Program will receive funds for purchase of service to provide public transportation to individuals who live in rural parts of the county but need access to services within the City of Fayetteville. Meanwhile, the Fayetteville Area System of Transit will receive funds to implement a Mobility Management Program.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Bicycle Connectivity	2017	2019

STRATEGY DESCRIPTION: FAMPO received a grant from the North Carolina Department of Transportation Bicycle and Pedestrian Division to implement a regional bicycle plan. FAMPO contracted with Alta Planning and Design.

UPDATED DESCRIPTION: Alta Planning and Design completed the Sandhills Regional Bicycle Plan in summer of 2019. The plan shows how bicycling can be a more viable option within an eight county region.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Fayetteville PWC	Community Solar Infrastructure	2017	2019

STRATEGY DESCRIPTION: Fayetteville Public Works Commission (PWC) has planned a one megawatt solar farm that will be funded through a community solar model. A portion of the project is funded by renewable energy fees collected from customers. The fees are allowed to be recovered through North Carolina's renewable energy mandates.

UPDATED DESCRIPTION: PWC has commissioned the solar farm and began offering shares in the project to the public in November 2019.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Local Food Access Program	2018	2019

STRATEGY DESCRIPTION: Sustainable Sandhills created a farmers market in partnership with Dirtbag Ales Brewery and Taproom. The market attracted numerous local food and craft vendors. The food vendors included local honey, produce, meat, eggs, cheese, bread and baked goods.

UPDATED DESCRIPTION: Over 40 local food and craft vendors participated in the Dirtbag Ales Farmers Market over 30 weeks in 2019. Sustainable Sandhills ended its partnership with Dirtbag Ales Brewery and Taproom in November 2019. Sustainable Sandhills plans to open other farmers markets at two new venues in spring 2020, with the hope of managing a farmers market in every county in our reach area over the next five years.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Electric Vehicle Adoption National Drive Electric Car Show	2019	

STRATEGY DESCRIPTION: Sustainable Sandhills hosted the first National Drive Electric Car show ever in Fayetteville in September 2019. This event showcased 21 privately owned electric vehicles and five different EV models for test drives. More than 200 area residents came out to participate in the event. The event drew people from as far away as Wilmington, NC.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Electric Vehicle Adoption Electric Vehicle Charging Infrastructure	2019	

STRATEGY DESCRIPTION: During the National Drive Electric Car Show in September 2019, Sustainable Sandhills asked participants where they would like to see electric vehicle charging infrastructure installed. Sustainable Sandhills will use that list to begin siting locations for EV charging stations throughout Fayetteville and the surrounding area. Sustainable Sandhills is planning a public information session for businesses interested in EV charging infrastructure for February 2020.

ORGANIZATION	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	NC DOT Bicycle + Pedestrian Planning Grant	2019	

STRATEGY DESCRIPTION: The North Carolina Department of Transportation Bicycle and Pedestrian Division announced the 2019 call for proposals for the Bicycle and Pedestrian Planning Grant.

UPDATED DESCRIPTION: FAMPO provided letters of support for the Town of Hope Mills and the Town of Spring Lake in support of the application for a pedestrian grant for each town.

AWARENESS

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO Sustainable Sandhills	Air Quality Poster Contest	2002/2003	2019
STRATEGY DESCRIPTION: FAMPO and Sustainable Sandhills promote an annual art contest with air quality themes. Twelve winning posters are included in calendars, which are distributed to air quality stakeholders and the community to promote conservation efforts and air quality education for students in kindergarten through fifth grade. The contest is open to students in Cumberland County and to schools within the FAMPO area.			
UPDATED DESCRIPTION: In 2019, the contest received 665 entries from schools (public and private) in Cumberland County. In order to engage more participation, the contest will be promoted along with a short air quality awareness lesson to teachers who teach health and wellness in kindergarten through fifth grade in Cumberland County public schools.			

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Green Business Certification Program	2009	2019
STRATEGY DESCRIPTION: Sustainable Sandhills implemented the Green Business Certification Program in 2009 to recognize businesses who are leaders of environmental stewardship in our region. A key component of the program is raising awareness about multiple environmental impacts including air quality and transportation alternatives.			
UPDATED DESCRIPTION: The Green Business Certification Program is currently under review to be revamped and updated for the next decade.			

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO Sustainable Sandhills	Direct Community Outreach	2011/2012	2019
STRATEGY DESCRIPTION: FAMPO and Sustainable Sandhills personnel display air quality information at community events and festivals, using educational collateral, games, crafts and promotional items.			
UPDATED DESCRIPTION: In 2019, FAMPO and Sustainable Sandhills personnel manned information booths at the Go Green Earth Day event with Cumberland County Schools, the Fayetteville Swamp Dogs (local college league baseball team) Green Night, Fayetteville Marksmen (local minor league hockey team) games, the Fayetteville Public Works Commission Conservation Fair, the South River Electric Membership Corporation Member Fair, Fourth Fridays in downtown Fayetteville, municipal events, state park events and regional farmers markets.			

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Alternative Transportation	2014 2017 first year reporting	2019
STRATEGY DESCRIPTION: FAMPO strives to increase the amount of alternative transportation options while also improving accessibility to these options. This strategy can include sidewalks, greenways, public transportation and rail. The Sandhills Regional Bicycle Plan was completed in late summer 2019. Plans for a light rail study in partnership with the Capital Area Metropolitan Planning Organization in Raleigh are underway for FY2020.			
UPDATED DESCRIPTION: In 2019, FAMPO awarded $344,678 to public transportation oriented projects through the 5310 Grant Program. The Cumberland County Community Transportation Program will receive funds for purchase of service to provide public transportation for individuals who live in rural parts of the county but need access to services within the City of Fayetteville. Meanwhile, the Fayetteville Area System of Transit (FAST) will receive funds to implement a Mobility Management Program.			

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills Cumberland County	School Air Quality Flag Program	2015	2018
STRATEGY DESCRIPTION: Each of the Cumberland County schools participate in air quality awareness using the color coded flags that represent the Air Quality Index. The flags are raised each day along with the United States flag and North Carolina flag. For schools that offer a morning television program, air quality is one of the discussion topics.			
UPDATED DESCRIPTION: For 2019, a survey was sent out to each of the 87 Cumberland County schools. A three phase action plan to increase school participation has been adopted.			

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
FAMPO	Social Media Awareness	2018	2019
STRATEGY DESCRIPTION: For the 2019/2020 Fayetteville Marksmen hockey season, FAMPO will offer various air quality contests on their Facebook page to win game tickets. For a chance to enter, participants must correctly respond. A winner's name is drawn from the entries.			

ORGANIZATIONS	STRATEGY	IMPLEMENTATION DATE	UPDATED/REVISED
Sustainable Sandhills	Wood Smoke Awareness	2018	2019
STRATEGY DESCRIPTION: In an effort to raise awareness about the hazards of wood smoke and educate people about prescribed burning, Sustainable Sandhills is working with the North Carolina Department of Health and Human Services and North Carolina Forestry Service to develop a wood smoke awareness campaign for school age children. The pilot program was implemented in the fall of 2018 with second graders from a single school in Hoke County. Smokey Bear is the star of the program, with a special four-minute presentation about the need for prescribed burns in our area and the health concerns associated with their smoke. The program will include reinforcement activities, such as worksheets, games and classroom posters.			

FAMPO
FAYETTEVILLE AREA
METROPOLITAN PLANNING ORGANIZATION

SUSTAINABLE SANDHILLS

The 2019 Ozone Advance Program Action Plan for the Fayetteville Metropolitan Planning Area was prepared by
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in cooperation with
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FAMPO
AIR QUALITY STAKEHOLDERS

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