

Clean Air Action Plan

Approved

February 2014

TABLE OF CONTENTS

Table of Contents ..... ***i***

Acknowledgements ***3***

Four States Clean Air Alliance Board Members 3

Participating Organizations 3

Introduction ***4***

Four States Clean Air Alliance 4

National Ambient Air Quality Standards 5

Ground-Level Ozone 5

Four States Clean Air Action Plan 6

Emissions Data ***7***

Ozone Forming Emissions in the Four States Region 7

Ozone Design Values 12

Emissions Reduction Strategies ***12***

1.0 Administrative *13*

Description 13

Tasks 13

Accomplishments 14

2.0 Education *15*

Description 15

Tasks 15

Accomplishments 16

3.0 Energy Conservation/Utility *17*

Description 17
Tasks 17
Accomplishments 18
4.0 Transportation 19
Description 19
Tasks 19
Accomplishments 21
Appendix A: Map of FSCAA Area 22
Glossary of Acronyms 23

ACKNOWLEDGEMENTS

The Four States Clean Air Alliance would like to thank the following members for their participation in developing the Clean Air Action Plan for the Joplin Metro area focusing on Jasper and Newton Counties in Missouri. Each individual listed below represents the segment of the larger community listed prior to their name while their place of employment is listed behind.

FOUR STATES CLEAN AIR ALLIANCE BOARD MEMBERS

- Environmental Task Force - Dan Pekarek, City of Joplin Health Department
- Jasper County City - Cassandra Ludwig, Carthage Water & Electric
- Jasper County City - Kevin Emery, Carthage Water & Electric
- Jasper County Government - John Bartosh, Jasper County Commission,
- Jasper County Industry - Jeff Burkett, Empire District Electric Company
- Jasper County Industry - Robin McAlester, Empire District Electric Company
- Jasper County Public Member - Mike Kennedy, Missouri Southern State University
- JATSO - Matt Wright, City of Joplin Planning & Community Development
- MoDNR - Assem Abdul, Missouri Department of Natural Resources
- MoDNR - Emily Wilbur, Missouri Department of Natural Resources
- MoDOT - Andrew Seiler, Missouri Department of Transportation
- Newton County City - Dana Daniel, City of Neosho Planning Department
- Newton County City - John Harrington, City of Neosho Building Inspections
- Newton County Government - Jim Jackson, Newton County Commission
- Newton County Industry - Spencer Dobbs, Mercy Hospital
- Newton County Public Member - Bob Hockman, TAMKO
- Regional Planning Council - Harry Rogers, Harry S. Truman Coordinating Council
- Regional Planning Council - Jason Ray, Harry S. Truman Coordinating Council
- Regional Planning Council - Nathan Jurey, Harry S. Truman Coordinating Council

PARTICIPATING ORGANIZATIONS

- Carthage Water & Electric
- City of Carthage
- City of Joplin
- City of Neosho
- Empire District Electric Company
- Environmental Protection Agency
- Environmental Task Force of Jasper and Newton Counties
- Harry S. Truman Coordinating Council
- Jasper County Commission
- Joplin Area Transportation Study Organization
- Mercy Hospital
- Missouri Department of Natural Resources
- Missouri Department of Transportation
- Missouri Southern State University
- Newton County Commission
- Ozarks Clean Air Alliance
- TAMKO Building Products, Inc

INTRODUCTION

FOUR STATES CLEAN AIR ALLIANCE

Air quality issues, while for years considered a problem for large metropolitan areas, have more recently been identified as a potential issue in mid-sized or smaller communities such as the Joplin Metro area. This is especially true for the air quality parameter of ozone, as federal ozone regulations have become more exacting in recent years as knowledge of the adverse health and environmental effects of ground level ozone are recognized. With this increased regulation, acceptable ground level ozone levels have been reduced to the point the Joplin Metro area could be considered in violation of these standards in the near future. In an attempt to proactively address this issue before it occurs, the Four States Clean Air Alliance (FSCAA) has been formed through a joint agreement of the Joplin Area Transportation Study Organization (JATSO) and the Environmental Task Force of Jasper and Newton Counties (ETF).

The purpose of FSCAA is to develop and implement a voluntary Clean Air Action Plan (CAAP) to achieve the following:

- Monitor the results of designated air quality monitoring stations,
- Increase awareness of the local public, governments and businesses regarding air quality issues,
- Inform the local public, governments and businesses on the environmental and health consequences of poor air quality,
- Educate community members about existing and proposed legislation concerning air quality as it affects our area, and
- Promote voluntary participation in the implementation of the CAAP.

The initial area of the FSCAA includes Jasper and Newton Counties in Missouri. In the future, invitations to join FSCAA may be extended to other relevant government entities adjacent to the Joplin Metro area, including McDonald County, Missouri; Cherokee County, Kansas; Ottawa County, Oklahoma; the Inter-Tribal Council (Miami, Oklahoma); and Benton County, Arkansas. These entities are likely to encompass contributors to ozone air quality levels in the Joplin Metro area of Jasper and Newton Counties.

The Governing Board of FSCAA is charged with the primary responsibility for development and implementation of the CAAP. The JATSO has final approval of all aspects of this plan before it may be considered final.

While this plan initially deals solely with ground level ozone, it may be amended in the future to address other air quality parameters as relevant to the area.

NATIONAL AMBIENT AIR QUALITY STANDARDS

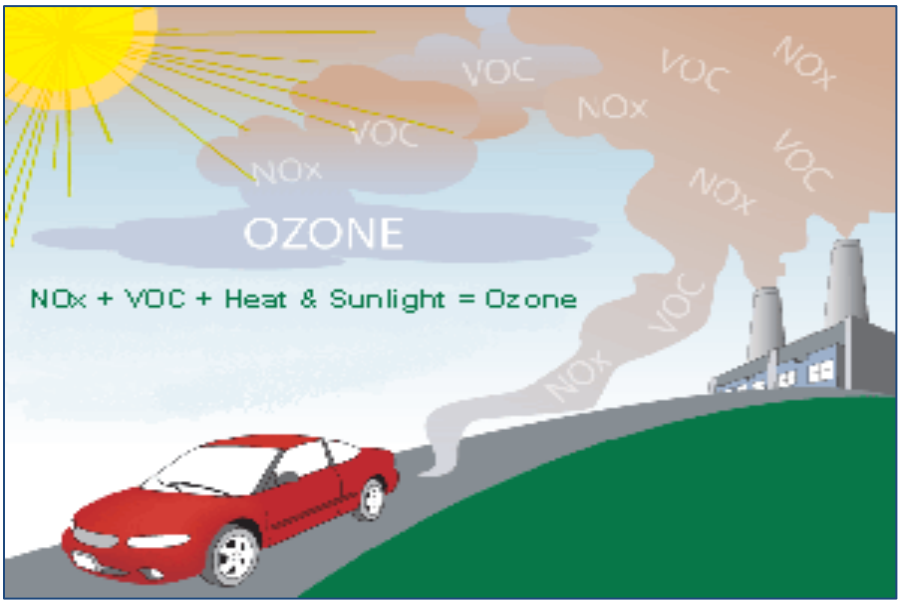
The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The six principal pollutants EPA has set NAAQS for include:

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Dioxide (NO_x)
- Ozone (O_3)
- Particulate Matter (PM)
- Sulfur Dioxide (SO_2)

For more information on these individual pollutants, please visit EPA's webpage at www.epa.gov/air/criteria.html.

GROUND-LEVEL OZONE

Ozone is a gas composed of three oxygen atoms. While ozone can be found both in the Earth's upper atmosphere and at ground level, the location where it is found determines if ozone is considered beneficial or harmful to humans and the environment. When it is found in the upper atmosphere, ozone is beneficial by protecting us from the sun's ultraviolet rays. However, when this same gas occurs at ground-level, it is harmful and causes significant negative effects on human health and the environment.



Ground-level ozone can cause the following health effects even at low concentrations:

- Aggravate asthma or other respiratory illnesses
- Irritate respiratory systems causing coughing and throat irritation
- Inflame and damage cells that line the lungs
- Reduce lung capacity, making it difficult to take deep breaths
- Increase susceptibility to respiratory illnesses
- Increase hospitalizations by aggravating respiratory illnesses

High levels of ground-level ozone can damage plants and other vegetation by making them more susceptible to disease, harsh weather, insects and other pollution.

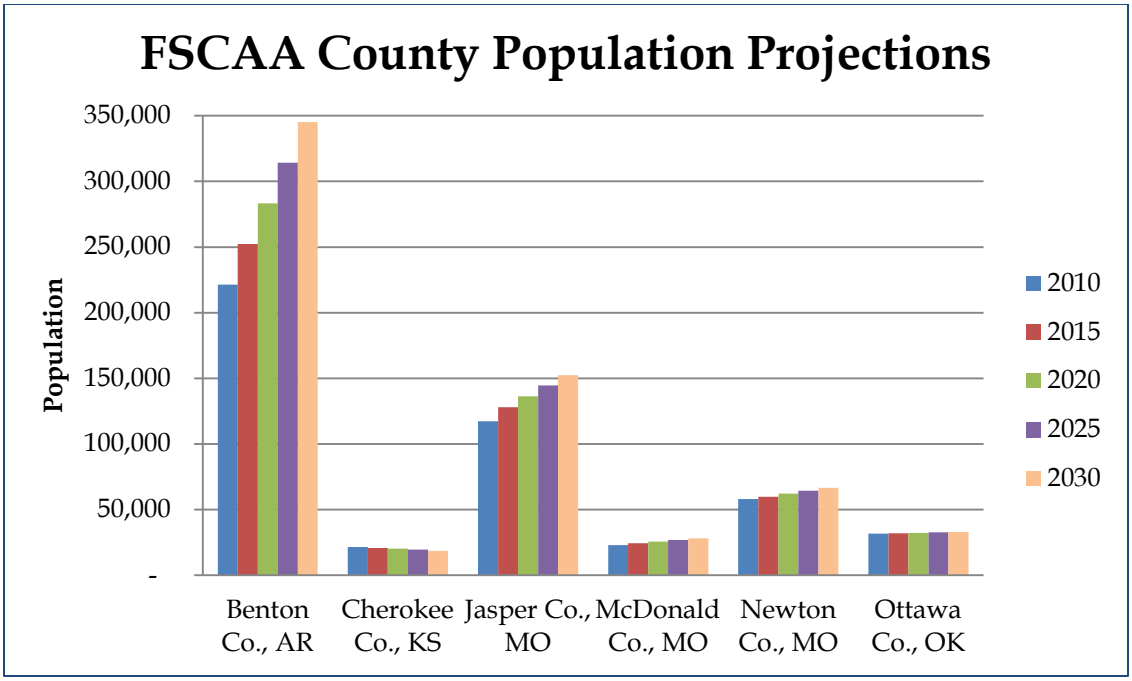
Ground-level ozone is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the atmosphere with sunlight and heat. Since ozone requires the combination of sunlight and heat to form, it is mainly of concern during "Ozone Season" from April through October. Consequently, FSCAA will apply concentrated education and prevention campaigns immediately before and throughout this time period.

FOUR STATES CLEAN AIR ACTION PLAN

The FSCAA currently serves Jasper and Newton counties in Missouri. However, additional areas to the south (McDonald County, Missouri; Benton County, Arkansas; and Ottawa County, Oklahoma) and to the west (Cherokee County, Kansas) are considered vital to ozone air quality efforts in the Joplin Metro area due to prevailing winds in the summer months. It is envisioned that FSCAA will be working closely with these other areas as planning and education efforts continue.

This region was chosen based on existing planning boundaries and potential sources that affect them while also taking into consideration the location of the air quality monitors for the region. Two of the counties are included in the FSCAA, while the four additional counties are upwind from the FSCAA area and therefore contribute to the air quality of the area. There are two ozone monitors in the region, one at Alba in Jasper County, MO, and one at Quapaw in Ottawa County, OK. A map of the Four States region can be seen in Appendix A.

The focus of most strategies in this CAAP is for the Joplin Metro area, which includes Jasper and Newton Counties, MO. Although not all of the counties are in the Joplin Metro area, the FSCAA is still dedicated to providing education and information to the six county region.



Source: Northwest Arkansas Regional Planning Commission, Wichita State University – Center for Economic Development & Business Research, Missouri Office of Administration – Budget & Planning, and Oklahoma Department of Commerce

Most counties in the Four States region are projected to experience significant growth through 2030. The fastest growing counties, Benton County, AR and Jasper County, MO are expected to grow by 56 percent and 30 percent respectively between 2010 and 2030. Although growth benefits the region in many ways, it is important to recognize the negative aspects, such as air pollution, that need to be managed. The goal of the FSCAA is to implement proactive and feasible voluntary strategies to protect public health and the environment while sustaining growth in the region.

EMISSIONS DATA

OZONE FORMING EMISSIONS IN THE FOUR STATES REGION

Emissions of NOx and VOCs that can contribute to the formation of ground-level ozone in the Four States area are generated from various sources including motor vehicle emissions, gasoline vapors, chemical solvents, commercial/industrial emissions, power plant emissions, gas-powered off-road equipment, and natural sources. These emissions are typically placed into categories of Non-Point, Mobile Non-Road, Mobile On-Road, Electric Generating Unit (EGU), Point and Natural (Biogenics) sources. Listed below are some common examples of different air pollution sources within each category.

NOx Emission Sources

Non-Point	Fires including agricultural fires, wildfires and prescribed burning Residential fuel combustion Small businesses that burn fuel for making products, cooking, space heating, water heating
Mobile Non-Road	Non-Road Engines Construction equipment (excavators, bull dozers, skid steers, etc.) Lawn & garden gas powered equipment (lawn mowers, trimmers, chain saws, leaf blowers, etc.) Off-road motorcycles & ATV's Golf carts Boats Farm equipment (tractors, sprayers, balers, etc) Aircraft Locomotives
Mobile On-Road	Diesel Heavy Duty & Light Duty Vehicles Gas Heavy Duty & Light Duty Vehicles Automobiles Motorcycles Heavy-duty trucks (Semi-tractor trailers, dump trucks, etc.)
EGU	Electric Generation Coal & Non-Coal Fuel Combustion
Point	Commercial & Institutional Fuel Combustion Industrial Fuel Combustion Industrial Processes Factories Large landfills Industrial & commercial boilers Office buildings (heating sources)
Biogenic	Vegetation & Soil

VOC Emission Sources

Non-Point	Residential fuel use, painting and solvent use Wildfires Bulk gasoline terminals Gas stations Agricultural sources Pesticide application
Mobile Non-Road	Construction equipment Agricultural equipment Lawn and garden equipment Commercial and leisure boats Railroad engines and equipment Aircraft
Mobile On-Road	Diesel Heavy Duty & Light Duty Vehicles Gas Heavy Duty & Light Duty Vehicles
EGU	Electric Generation Coal & Non-Coal Fuel Combustion
Point	Commercial - Institutional Fuel Combustion Industrial Fuel Combustion Industrial Processes Waste Disposal Chemical processing Large petroleum storage facilities Dry cleaners, auto body shops, printers, painting operations, etc.
Biogenic	Vegetation & Soil

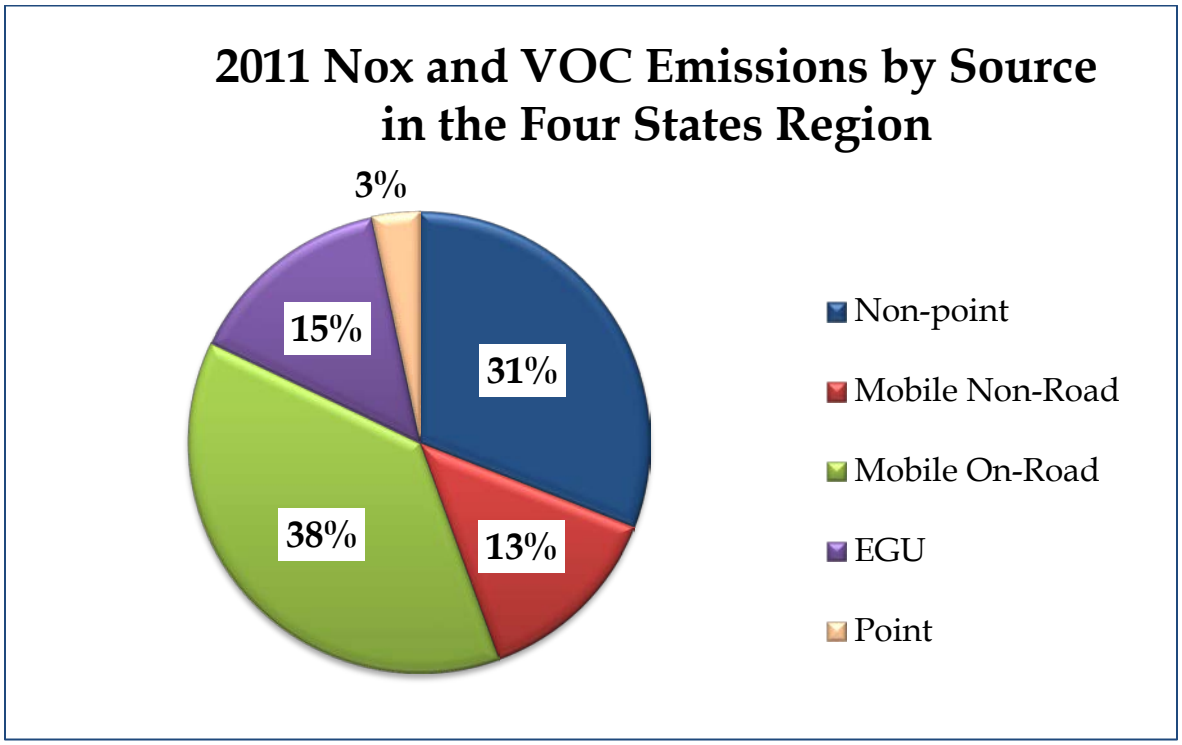
Biogenics

- Plants and trees
- Biologic decay

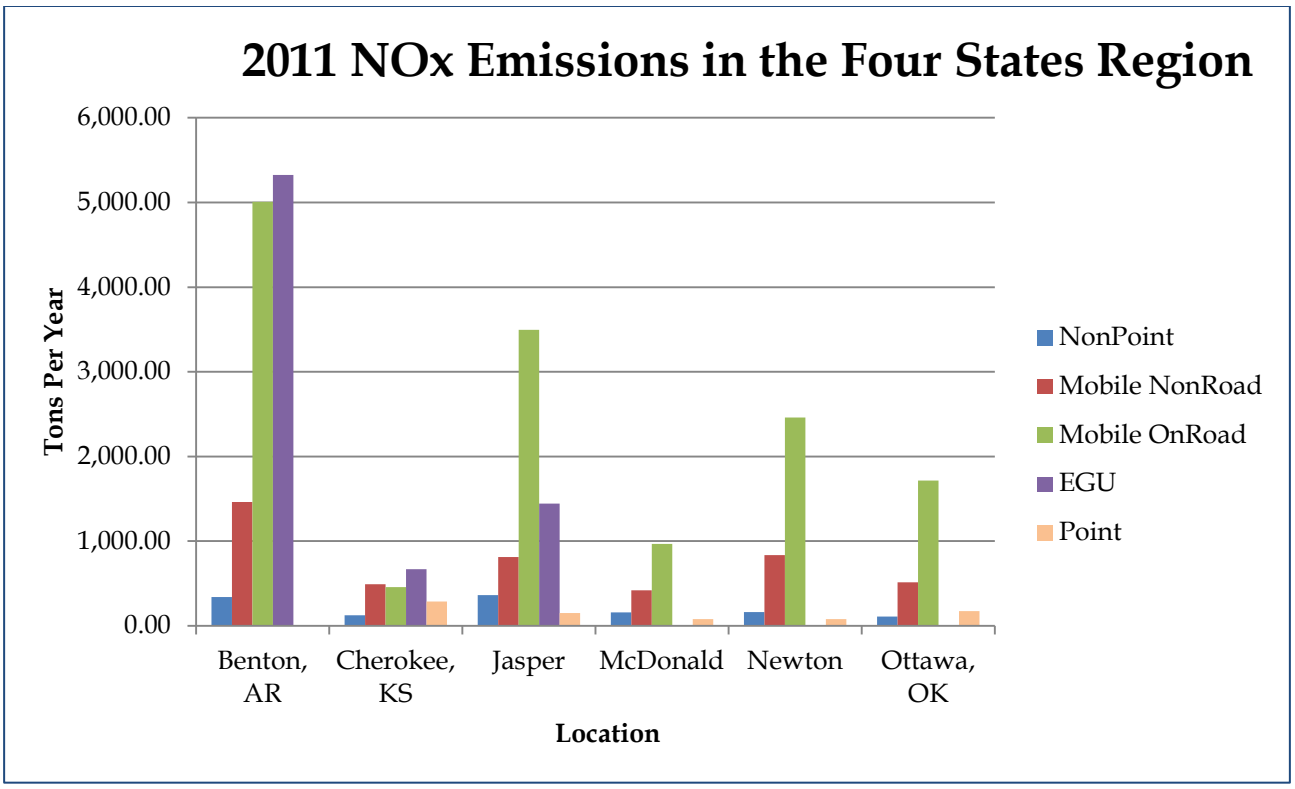
Plants and trees provide tremendous resources including air pollutant removal, oxygen production and cooling benefits. According to the MoDNR emissions inventory, biogenic sources contribute

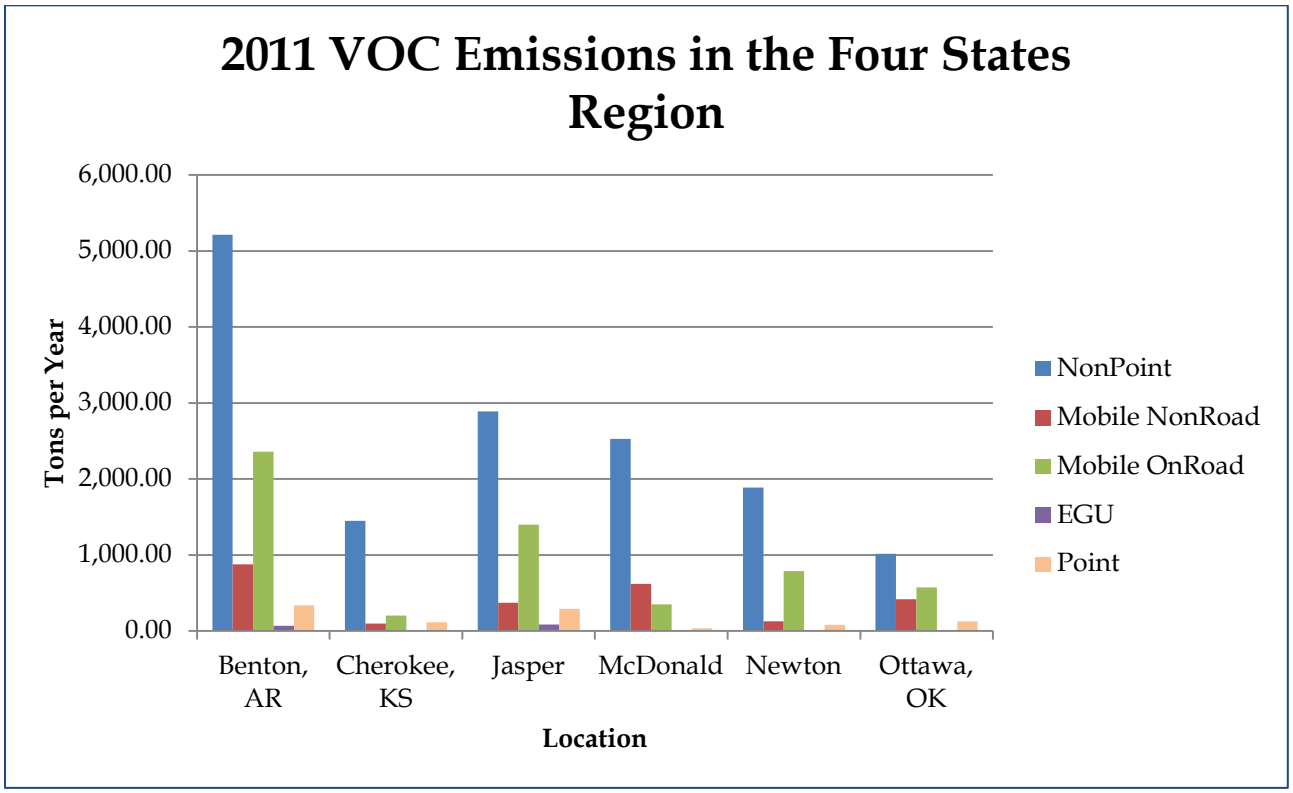
approximately 5% of the total NOx emissions and approximately 70% of the total VOC emissions for the Four States region. Since humans have no control over biogenic sources of emissions, the CAAP does not include strategies to reduce natural sources of air pollution. Instead, focus will be placed on strategies to reduce emissions from man-made sources of air pollution.

The following graphs show the amount (tons per day) of NOx and VOC emissions from man-made source categories by county.



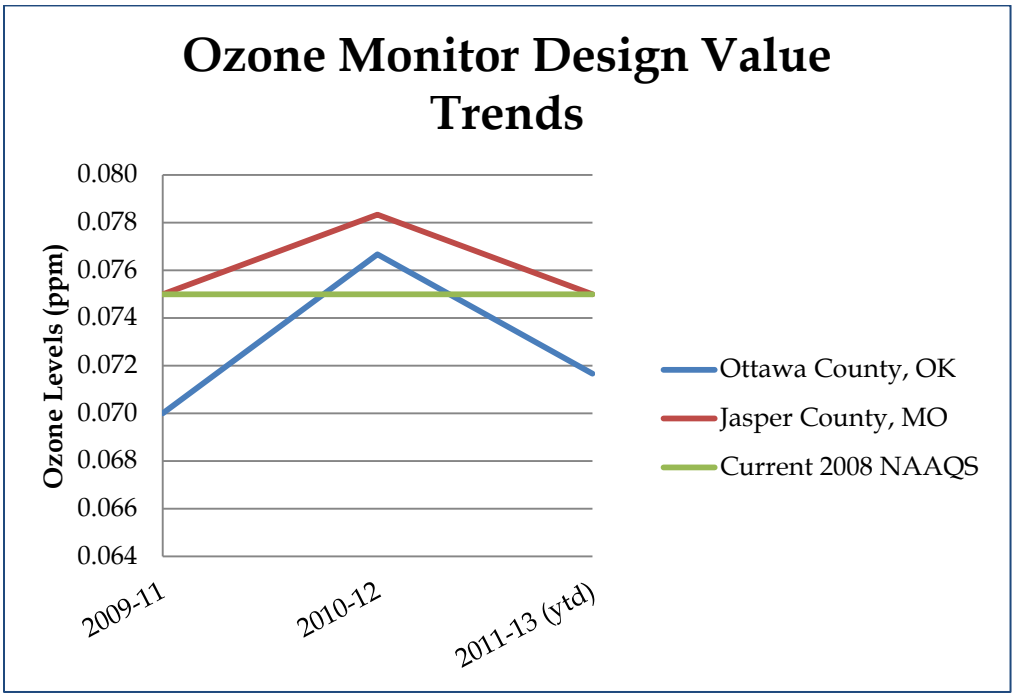
Note: Data was provided by MoDNR from 2011 base year emissions (except for mobile on-road emissions which currently include 2008 data for Arkansas, Oklahoma and Kansas). Once MoDNR completes the 2011 on-road emissions for Arkansas, Oklahoma and Kansas, the plan will be updated.


2011 NOx Emissions in the Four States Region
6,000.00
5,000.00
4,000.00
3,000.00
2,000.00
1,000.00
0.00
Tons Per Year
Benton, AR
Cherokee, KS
Jasper
McDonald
Newton
Ottawa, OK
Location
NonPoint
Mobile NonRoad
Mobile OnRoad
EGU
Point


2011 VOC Emissions in the Four States Region
6,000.00
5,000.00
4,000.00
3,000.00
2,000.00
1,000.00
0.00
Tons per Year
Benton, AR
Cherokee, KS
Jasper
McDonald
Newton
Ottawa, OK
Location
NonPoint
Mobile NonRoad
Mobile OnRoad
EGU
Point

OZONE DESIGN VALUES

The following chart shows the design values for ozone monitoring conducted in Jasper County, MO and Ottawa County, OK since 2009. The ozone design value is the 3-year average of the fourth highest 8-hour ozone level for each year. A violation occurs if an area's ozone design value exceeds the 8-hour ambient air quality standard established by the EPA. In March 2008, EPA lowered the 8-hour standard from 0.084 parts per million to 0.075 parts per million.



EMISSIONS REDUCTION STRATEGIES

Reducing ozone levels in the Joplin Metro area will be difficult due to many sources of ozone precursors are not located in the area. Ozone generation is dominated by up-wind stationary sources and vehicular traffic on the adjacent interstates. The strategies identified in this document can be implemented by organizations and individuals in the region to reduce air pollution. The unavailability of photochemical modeling data prevents the region from quantifying the impacts of various strategies.

Many of these strategies have been proven effective in other communities, providing numerous benefits including:

- Protection of public health and environment
- Prevention of state and federal regulations following a non-attainment designation
- Reducing air pollutants from contaminating surface water
- Improving community health by encouraging bicycling and walking
- Conserving natural resources
- Reducing dependency on foreign oil
- Fiscal savings for individuals, businesses, local governments, and other organizations

The purpose of the CAAP is to implement specific viable voluntary strategies that can reduce the formation of ground-level ozone. There must be strong support and participation by local governments, industries, organizations, and the public for the program to be successful. Four target categories have been identified as specific areas in which to focus to reduce ground-level ozone.

1.0 ADMINISTRATIVE

DESCRIPTION

The following duties and responsibilities to be conducted by the FSCAA board will allow the FSCAA to continue its work of raising awareness and reduction of ground-level ozone in the Four States region.

TASKS

1.1 SHORT TERM

1.1.1 Four States Clean Air Alliance

Form a coalition of interested stakeholders from Jasper and Newton Counties to develop a Clean Air Action Plan designed to increase awareness and promote reduction strategies of ground-level ozone in this region.

Timeframe: Completed in October 2013

1.1.2 Funding

Since there is not currently a funding stream dedicated for this group, the FSCAA board will continue to research funding sources in form of state and federal grants, local foundations and others that will provide financial support for various educational efforts.

Timeframe: Ongoing

1.1.3 Staffing

As there is no dedicated staffing for this group, the FSCAA board will continue to seek out personnel assistance in the form of volunteers, interns and possibly paid staff to do the work required.

Timeframe: Ongoing

1.1.4 Outreach

The FSCAA board will oversee the development of a general education plan including messaging content and appropriate timelines to disseminate into the community. This will involve revising message content as needed and contacting local community and businesses to involve them in message distribution.

Timeframe: Ongoing

1.2 LONG TERM

These tasks will be evaluated for completion as funding and other resources become available.

1.2.1 Outreach

Once awareness efforts have been made into the local community in Jasper and Newton Counties, the FSCAA board will reach out to other jurisdictions that impact the Joplin Metro region, such as McDonald County, MO; Ottawa County, OK; Cherokee County, KS and Benton County, AR. The board will extend an invitation to these entities to attend FSCAA meetings and events as well as provide education, garner support and cooperation and implement ozone reduction strategies in their residences, businesses and institutions.

Timeframe: Ongoing

ACCOMPLISHMENTS (updated annually)

The formation of FSCAA was completed in October 2013 with board members representing local government, industry, academia, citizens and environmental organizations.

2.0 EDUCATION

DESCRIPTION

Air quality awareness applies to both the general public and businesses. Increasing education about air quality will aid in the decision-making process based on an understanding of the broader impacts of everyday activities. The objectives of the tasks in this section are to increase the level of knowledge of individuals and the business community about actions that can be done to reduce ground-level ozone.

TASKS

2.1 SHORT TERM

2.1.1 Message

Develop FSCAA's educational communication plan, along with a timeline to deliver components of the various topics at specific times. Identify options for communication message delivery methods, such as bill inserts, press releases, newsletters articles, media appearances, etc. Encourage large companies, schools, hospitals, etc. to disseminate provided information about ground-level ozone during the ozone season. Meet with organizations with large fleets to advocate the "No Idle" message.

Timeframe: By March 2014

2.1.2 Website

Develop, promote and maintain the FSCAA website to act as a central site to disseminate information to the community.

Timeframe: Website launch, April 2014. Maintenance ongoing.

2.1.3 Public Service Announcement (PSA)

Develop a PSA series to be released as outlined in the communication plan to increase public awareness of ozone issues.

Timeframe: By April 2014

2.1.4 Social Media

Develop, promote and maintain a presence on social media such as Facebook, Twitter and YouTube.

Timeframe: Initial launch, April 2014. Maintenance ongoing.

2.1.5 Speaker's Bureau

Develop presentation along with talking points. Identify appropriate speakers and secure speaking opportunities to promote ground-level ozone awareness to create an educated population who will take actions to reduce O_3 precursors.

Timeframe: By May 2014

2.2 LONG TERM

These tasks will be evaluated for completion as funding and other resources become available.

2.2.1 Video

Identify partners to produce a 10 to 15 minute video to be used as part of an educational package.

2.2.2 Portable Education Unit

Create and purchase an educational display that can be easily transported for use at various events and activities.

2.2.3 Permanent Education Display

Create and purchase a display similar to the portable unit but one that can be installed permanently at an appropriate location, such as the Wildcat Glades Conservation and Audubon Center in Joplin, MO; the Southeast Kansas Nature Center in the Schermerhorn Park in Galena, KS or a tribal center in NE OK.

ACCOMPLISHMENTS (updated annually)

An initial messaging plan has been created, which will be modified as needed.

3.0 ENERGY CONSERVATION/UTILITY

DESCRIPTION

The implementation of energy conservation programs by individuals, businesses, and municipalities can have an impact on energy production thus reducing air pollutants.

TASKS

3.1 SHORT TERM

3.1.1 NOx reductions from power plants

Empire maintain NOx levels at or below 2007 baseline - In practice using low-NOx boilers

Timeframe: Measured annually at end of Ozone Season. Data reported annually by year end.

3.1.2 VOC reductions from power plants

Carthage Water & Electric maintain VOC levels at or below 2011 baseline

Timeframe: Measured annually at end of Ozone Season. Data reported annually by year end.

3.1.3 Energy Conservation Awareness/Programs

Promote energy conservation and efficiency messaging to customers as developed and provided by the education committee.

Timeframe: Annually April-October

3.1.4 Energy Conservation Awareness/Programs

Promote energy conservation and efficiency messaging to employees and other internal audiences as developed and provided by the education committee.

Timeframe: Annually April-October

3.2 LONG TERM

N/A

ACCOMPLISHMENTS (updated annually)

Empire District Electric Company has already taken steps to significantly reduce NOx emissions from their plants. Since 2009, Empire has reduced an average of 569 NOx tons/year from the Riverton Plant, 3,324 NOx tons/year from the Asbury Plant and 624 tons/year of NOx from the Iatan 1 Plant. Empire expects they will continue to produce 15 percent to 17 percent of their total net system input with their hydro facility at Ozark Beach, Missouri and through power purchase agreements with Elk River Wind Farm, LLC and Meridian Way Wind Farm, LLC. Empire anticipates they will sell the majority of the environmental attributes associated with the wind farm generation.

During 2013, Empire reduced 966 tons of NOx from the Riverton Plant, 2,540 tons of NOx from the Asbury Plant, and 650 tons of NOx from the Iatan 1 Plant. Improvements at the Asbury and Iatan 1 Plants are due to the installation of Selective Catalytic Reduction NOx Systems. Empire produced 16 percent of their total net system input in 2013 with their hydro facility at Ozark Beach, Missouri, and through power purchase agreements with Elk River Wind Farm, LLC and Meridian Way Wind Farm LLC. Empire has sold the majority of the environmental attributes associated with the wind farm generation.

Since 2006, Empire has implemented 19 different energy conservation incentive programs, saving its customers across four states the electric usage of 6,000 homes (71,000 MWh) and one state with lower natural gas usage.

Carthage Water & Electric Plant (CW&EP) has already taken steps to reduce VOC emissions from the Carthage power plant. In the winter of 2011/2012, CW&EP installed catalytic converters on its engines, which reduce the amount of VOC being emitted from the plant. As a result, during 2013, CW&EP reduced the VOC emissions from its power plant by 46.7 percent. The Carthage power plant is a peaking facility, meaning the plant only generates power on days when power is in highest demand. Therefore, the amount of generation can fluctuate depending on the weather. Because of these fluctuations, simply stating the amount of reduction in tons per year may not accurately reflect the overall efficiency of reduction. Thus, the reduction is shown as a percentage of overall VOC reduced, rather than in tons.

CW&EP also has a purchase power agreement with Southwestern Power Administration for hydro power generated at U.S. Army Corps of Engineers reservoirs. CW&EP receives on average 5 percent to 6 percent of their total net system input from this hydro purchase power agreement. During 2013, CW&EP received 5.2 percent of its total net system input from hydro resources operated by Southwestern Power Administration. Most of this hydro power came during the summer months

when the plant was peaking, thereby reducing the amount of power the plant was forced to generate on its own.

4.0 TRANSPORTATION

DESCRIPTION

Transportation sources are a significant contributor to emissions in the region. Steps to reduce emissions in this area can be taken by individuals, business, and through engineering and traffic management. FSCAA's role is to advocate for transportation improvement projects and help spread news about funding notices and related information as it comes available. FSCAA will communicate with interested stakeholders to give support for initiatives as they arise.

TASKS

4.1 SHORT TERM

4.1.1 Idle Reduction

Develop a message promoting and encouraging the creation of Idle Reduction efforts within organizations with a fleet such as businesses, schools, institutions and local governments and also including individual driving habits.

Timeframe: April 2014 and ongoing

4.1.2 Congestion Management Projects

Advocate design and construction of congestion management projects targeted at local governments, engineers and others responsible for making improvements to the transportation system that will reduce idle time. Examples of these types of efforts include access management, dual left turn lanes, DDI (Diverging Diamond Interchange), round-a-bouts and ITS (Intelligent Transportation Systems).

Timeframe: Ongoing

4.1.3 Alternative Transportation and Commute Projects

Advocate design, construction and/or implementation of alternative transportation and commute projects such as sidewalks, trails, bike paths and public transit, to encourage the development of a multi-modal system. Encourage employee commuter transportation programs. Support additional dedicated funding for such projects.

Planned Alternative Transportation and Commute Projects

- Connected, regional bicycle and pedestrian system for the Joplin Metro area.
- Development of new Master Trail Plan, which is expected to add an additional 35 miles of trails in Joplin.
- Expansion to the Thom Station Trail in Carl Junction with proposed connections to Joplin trail system.
- Promote additional sidewalks through Transportation Alternatives funding.
- Incorporation of sidewalks and bicycle lanes into new road widening projects (Complete Streets).
- Encouraging multi-modal transportation usage through planning, zoning, and design requirements at the local government level.
- Exploring increased service and expanded routes for the Sunshine Lamp Trolley (Joplin public transportation system).

Timeframe: Ongoing

4.2 LONG TERM

These tasks will be evaluated for completion as funding and other resources become available.

4.2.1 Diesel Emissions Reduction

Continue to research and promote funding for the retrofitting or replacement of commercial diesel vehicles or equipment as it becomes available.

Timeframe: Ongoing

4.2.2 Alternative Transportation and Commute Projects

Advocate design, construction and/or implementation of alternative transportation and commute projects such as sidewalks, trails, bike paths and public transit, to encourage the development of a

multi-modal system. Encourage employee commuter transportation programs. Support additional dedicated funding for such projects.

Alternative Transportation and Commute Projects

- Encourage development and use of park and ride lots.
- Continue to plan and develop the West Bypass on the west side of the Joplin metropolitan area that will reduce idling on other routes.
- Promote use of "walking school bus" or "bicycle train" to encourage children to walk or bike to school.
- Completion of Joplin Master Trail Plan.
- Connection of Thom Station Trail with Joplin trail system.
- Improved peak hour transit service and expansion of public transit system.

ACCOMPLISHMENTS (update annually)

Major Transportation Projects Completed in the Joplin Metro Area (2009-2014)

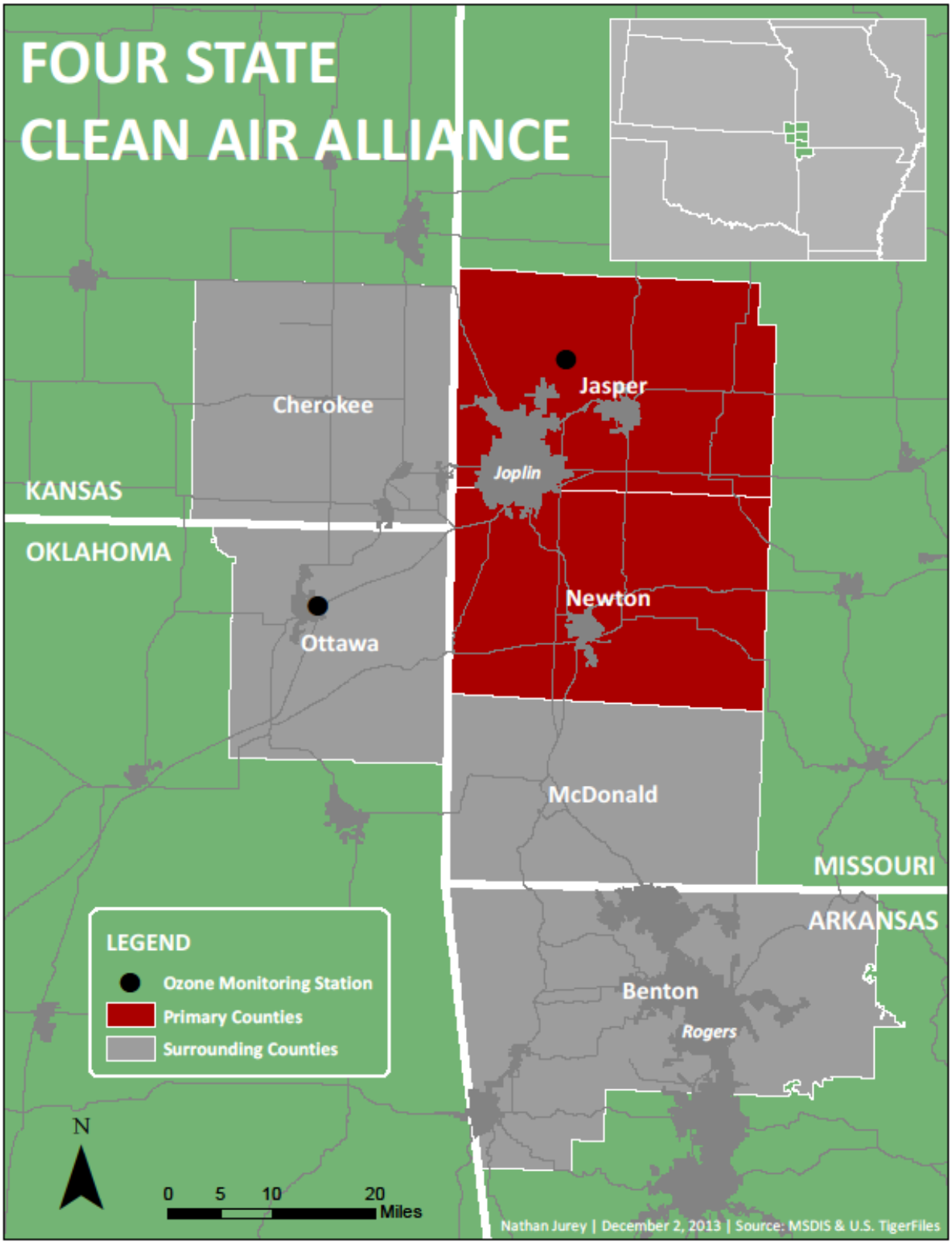
Project	Road	Pedestrian	Bicycle*	Transit**	Completed***
32nd St. 5 lane widening (Main to Jackson)	X	X		X	2009
32nd St. & Main intersection (dual turn lanes)	X	X		X	2009
New signalized intersection on 60 at Howard Bush in Neosho	X				2009
Connecticut Ave. 5 lane widening (Murphy Blvd. to 30th)	X	X	X		2010
Prigmore Rd./CR 190 3 lane widening (32nd & I-44)	X				2010
Video equipment along I-44	X				2010
Ramp improvements at various locations on I-49	X				2012
N. Main/Rte. 43 & Zora Ave. interchange	X	X			2013
I-44 & Range Line Diverging Diamond Interchange (DDI)	X	X			2013
Pedestrian improvement on 571 from E to 71 in Carthage		X			2013
Schifferdecker Ave. 5 lane widening (7th to 32nd Streets)	X	X	X		2014
26th St. 3 lane widening (Maiden to Schifferdecker)	X	X	X		2014
I-44 & Hearnes Blvd. interchange improvements	X	X			2014
MacArthur Dr./Rt. 171 & Centennial Ave. roundabout	X				2014
Intersection improvements on HH at Hazel St. in Carthage	X				2014
Maiden Lane 5 lane widening (9th to 32nd Streets)	X	X	X	X	2015
20th St. overpass at Kansas City Southern crossing	X	X	X	X	2015
20th St. multi-modal trail (Range Line to Murphy Blvd.)		X	X	X	2015
N. Main/Rte. 43 & Rt. 171 roundabout	X	X			2015
I-44 & Prigmore Rd./CR 190 interchange	X				2015

* Dedicated bicycle lanes on road or trail

** Transit on route

*** Completed or expected completion date

APPENDIX A: MAP OF FSCAA AREA



GLOSSARY OF ACRONYMS

CAAP	Clean Air Action Plan
EPA	Environmental Protection Agency
ETF	Environmental Task Force of Jasper and Newton Counties
FSCAA	Four States Clean Air Alliance
HAPs	Hazardous Air Pollutants
JATSO	Joplin Area Transportation Study Organization
MoDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
NAAQS	National Ambient Air Quality Standards
NOx	Nitrous oxides
O_3	Ozone
VOC	Volatile Organic Compounds