

Wichita Area Air Quality



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Summary

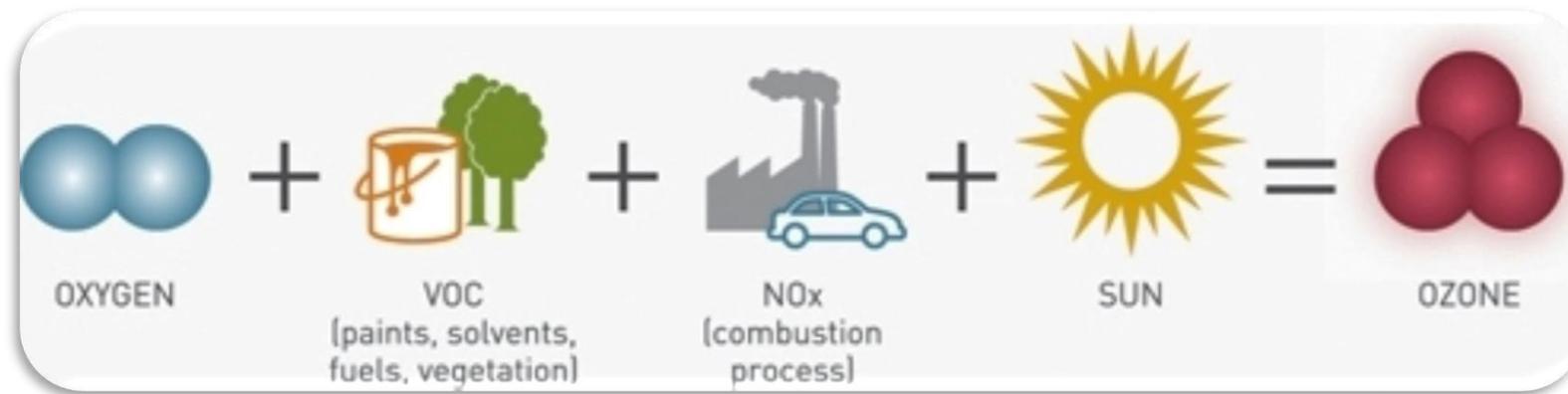
- Background
 - Ozone Formation
 - New Standard and Possible Implications
- Wichita Area Air Quality
 - Current Status
 - Ozone Advance Program
 - Air Quality Improvement Task Force
 - Path Forward Projects
 - Ozone Action Plans
- Questions

Ozone (O_3)

Ozone (O3)

Ground-Level Ozone Formation

- When Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs) mix in the presence of sunlight, Ozone is formed



- Wichita and the surrounding MSA generate both NO_x and VOC emissions due to our industry and way of life

Ozone (O₃)

Ground-Level Ozone Formation

NO_x emissions sources include:

- Automobiles
- Trucks
- Non-road vehicles (e.g., construction equipment, boats, etc.)
- Power plants
- Industrial boilers
- Cement kilns
- Turbines

VOC emission sources include:

- Paints, inks, lacquers
- Adhesives, solvents
- Wood coating
- Metal part painting
- Plastic part coating
- Fabric coating
- Cabinet/countertop lamination
- Furniture coating
- Printing presses
- Screen printing units
- Motor vehicle repair shops

Ozone (O₃)

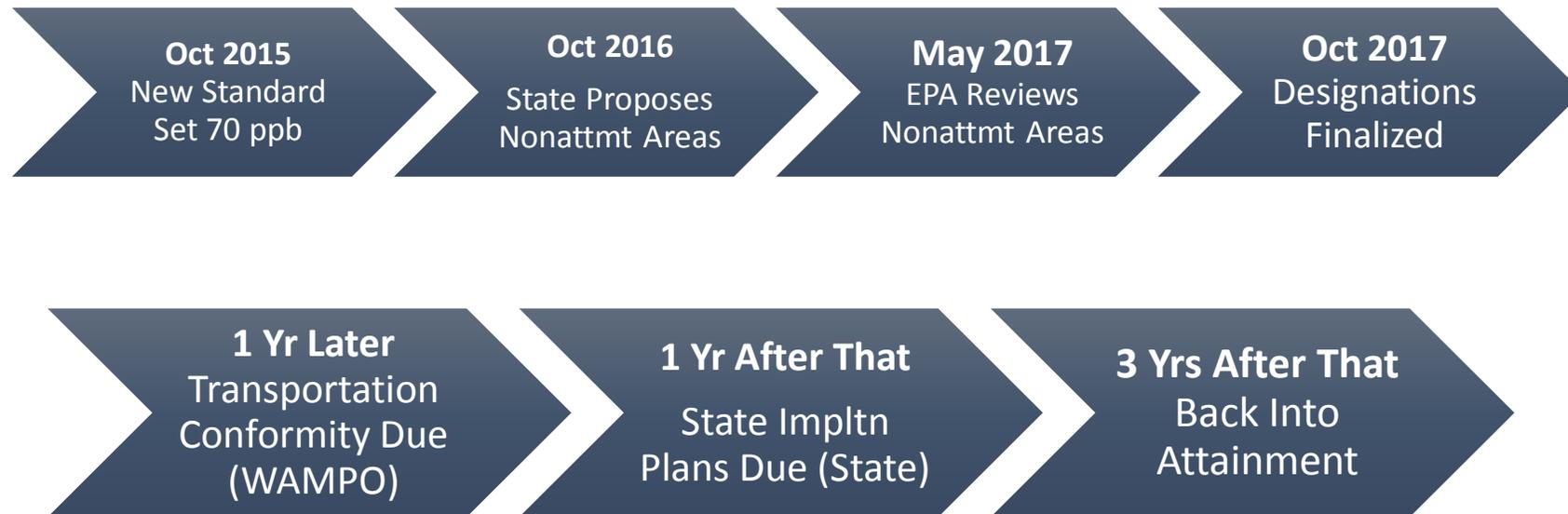
National Ambient Air Quality Standards

- Environmental Protection Agency specifies a maximum allowed measurement for ozone (O₃) to be present in outdoor air
- Recently lowered from 0.075 parts per million (ppm)
- Current allowed measurement for ozone is 0.070 parts per million
 - More commonly referred to as 70 parts per billion (ppb)
- Measurement is determined by the fourth-highest daily maximum 8-hour average, averaged across three consecutive years
- Areas within each state are "designated" as either meeting ozone standards (attainment) or not meeting them (non-attainment)

Wichita Area Air Quality

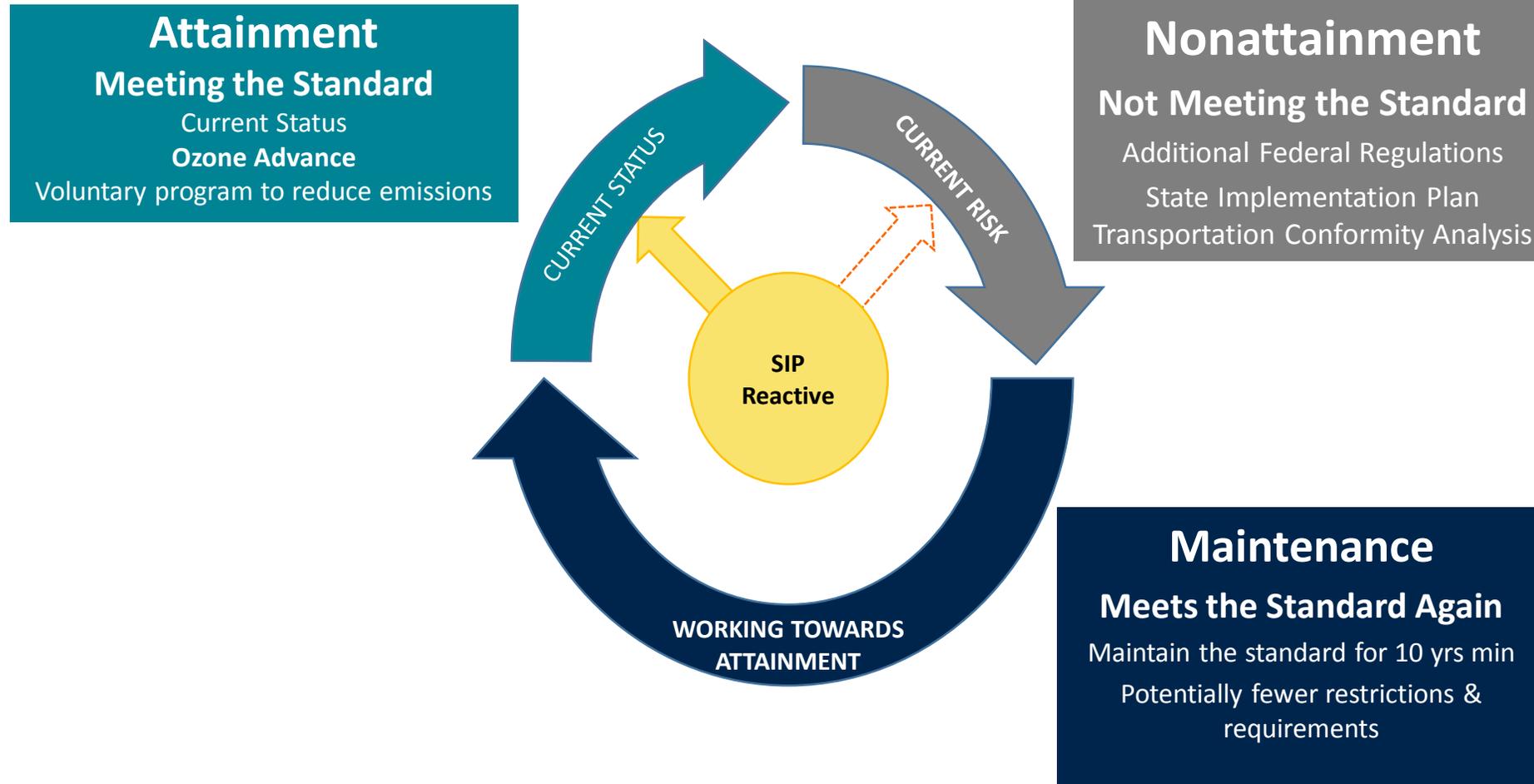
New Standard Timeline

- New standards finalized – Oct 2015 – 70 ppb
- Designations (nonattainment areas) likely to be based on 3-year time band 2014-2016



Wichita Area Air Quality

Ozone Non-Attainment Classifications



Wichita Area Air Quality

Impacts of Non-Attainment

BUSINESS & INDUSTRY

- More Federal Regulation
- More Stringent Permitting Requirements for Industry
- Increased Costs for Businesses
- Loss of New Business
- Road Funding Impacts

CITIZENS & VISITORS

- New Fuel Blend Requirement
- Higher Fuel Costs
- Higher Energy Costs
- Health Care Costs for Some Individuals
- Decreased Quality of Life

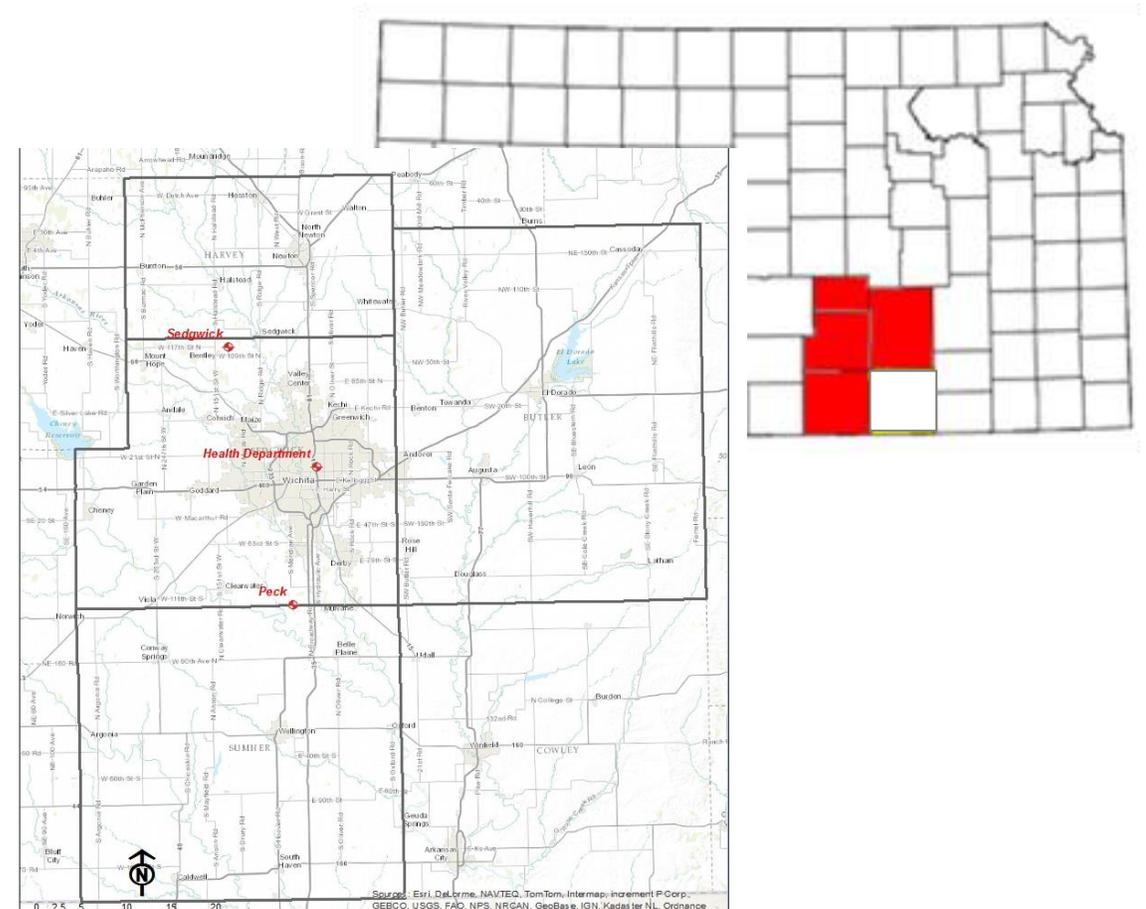
Cost estimates range in the tens of millions of dollars annually and are ongoing for at least 10 years.

Wichita Area Air Quality

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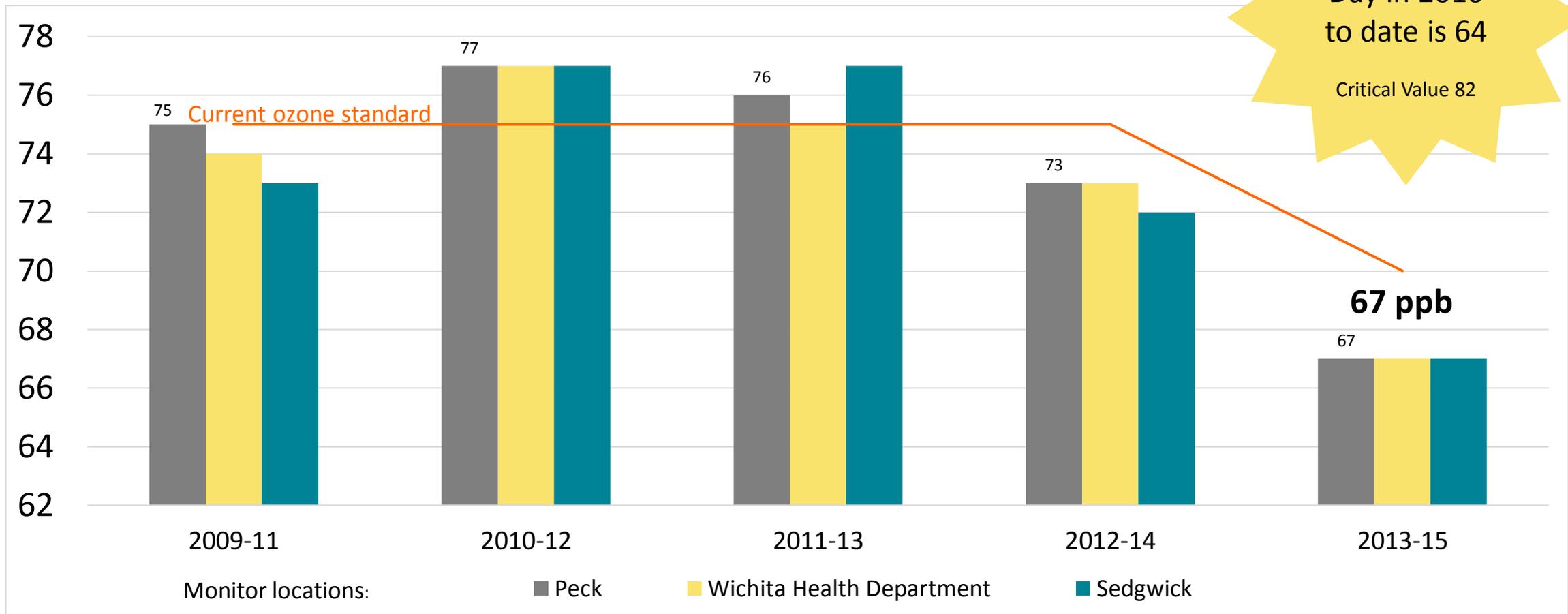
Monitor Location and Measurement Parameters

- Wichita Metropolitan Statistical Area (MSA)
 - Sedgwick, Butler, Harvey & Sumner Counties
- Air Pollutants currently monitored include:
 - **Ozone**
 - PM_{10}
 - SO_2
 - NO_x
 - CO
 - Pb



Wichita Area Air Quality

Current Status – Wichita Area Ozone Design Values



Wichita Area Air Quality

Ozone Advance Program

- Voluntary Environmental Protection Agency (EPA) program
- Goal is to reduce ozone levels to remain in attainment
- Wichita MSA joined in August 2012 when ozone levels exceeded the standard
- Continue to be involved as a proactive strategy of maintaining attainment status

Wichita Area Air Quality

Ozone Advance Program

Ozone Advance

Voluntary Environmental Protection Agency (EPA) Program
Reduce Ozone Levels to Remain in Attainment
Wichita Region Joined August 2012

Air Quality Improvement Task Force

Regional Stakeholder Group, Facilitated by City of Wichita
Promotes Ozone Advance and Path Forward Projects

Path Forward Plan

Annual update features Path
Forward Project Outcomes
Menu of Options for Individual
Projects and Ozone Action Plans

City of Wichita
Ozone Action Plan

**Air Quality Improvement
Task Force Member**
Ozone Action Plans(s)

Non-Member
Ozone Action Plan(s)

Wichita Area Air Quality

Air Quality Improvement Task Force

- Regional stakeholder group
- Promotes Ozone Advance Program
- Facilitated by City of Wichita employee
- Authors Path Forward Plan and Annual Updates
- Tracks Path Forward Project(s) performance measures and outcomes
- Encourages local governments, organizations and businesses to implement Path Forward projects and/or create Ozone Action Plans

Wichita Area Air Quality

South Central Kansas Air Quality Projects

Regional Air Quality Projects

- Elevated Railroad Bridges
- Ozone Alerts
- Intelligent Transportation System (ITS)
- No Idling Policies
- Diesel Fleet Improvements
- Wichita Bicycle Master Plan
- Transit Alternative Fuel Study
- Vanpool Study
- Clean Air Car Clinics
- Open Burning Education & Restrictions
- Ozone Action Plan Partnerships

Wichita Area Air Quality

Smoke Management Plan

- Kansas Department of Health and Environment Burn Restrictions
 - Calls for voluntary reduction or planning of agricultural and rangeland burning
 - Prohibits open burning during the month of April
 - Includes brush piles, construction materials and land clearing
- City of Wichita April Burn Ban
 - Prohibits all open burning within city limits
 - Includes fire pits, chimineas and bonfires
 - Does not include gas and charcoal grills
- Smoke Impacts Air Quality in a Variety of Ways
 - Visibility
 - Particulate Matter
 - Ozone

Wichita Area Air Quality

Air Quality Improvement Task Force

Revitalization effort

- Rebranding
- New Organizational Structure
 - Subcommittees
 - Membership, Outreach/Education, Ozone Action Plan, Planning and Technical
- Annual Workshop for regional stakeholders to collaborate on regional efforts
- Currently building partnerships with regional leaders to prepare for possible nonattainment designation
- Will continue to track projects, encourage Ozone Action Plans and author Path Forward Plan

Wichita Area Air Quality

Path Forward Plan

- Regional Ozone Advance Plan
- Created and updated by Air Quality Improvement Task Force
- Features
 - Current air quality status
 - Regional projects
 - Tracks Path Forward Project(s) performance measures and outcomes
 - Includes all Ozone Action Plans currently in place
- Serves as a menu of options for individuals interested in getting involved

Wichita Area Air Quality

Ozone Action Plan

- Individual plan consisting of projects, activities or programs that your business, agency or organization will do to decrease ozone-forming emissions (NOx and VOCs)
 - Path Forward Project
 - Best Management Practices
- Ozone Action Plans are shared with the City Manager
- Success stories are included in the Annual Path Forward Update, submitted annually to the EPA

Wichita Area Air Quality

Ozone Action Plan at Your Organization

- ✓ Air Quality Representative
 - ✓ Receives and disseminates Ozone Alert Information
- ✓ Create a No Idling Policy, even if it is just limited to your parking lot
- ✓ Upgrade your fleet – Postpone fueling
- ✓ Teleconference
- ✓ Encourage employees to pack a lunch
- ✓ Provide Carpool/Rideshare Incentives
- ✓ Provide Flexible Scheduling
- ✓ Provide Transit Ride Passes for employees willing to commute via Wichita Transit
- ✓ Postpone lawn work to after 6PM
- ✓ Avoid using ovens, paints, varnishes and solvents in the heat of the day
- ✓ Complete a Path Forward Project
- ✓ Encourage employees to sign up for Ozone Alerts www.wichita.gov/ozone

Wichita Area Air Quality

Example: City of Wichita Ozone Action Plan

- No Idling Policy
- Ozone Alerts
 - Goal—Avoid High Ozone Days
 - 24hr Advance Notice
 - Operational Adjustments
- Sign up for Ozone Alert Emails
www.wichita.gov/ozone

Tomorrow's Forecast



On **Ozone Alert Days** ozone levels are forecasted to be above the standard.

Make adjustments to City operations to reduce emissions of NOx and VOCs that cause ozone. See "Ozone Alert Actions" below for more details.

Health impacts may be observed for active children and adults, as well as people with respiratory diseases like asthma and bronchitis. Limits to outdoor exposure are recommended.

Wichita Area Air Quality

Example: City of Wichita Ozone Action Plan

- Postpone Mowing & Small Engine Use
- Postpone Painting & Solvent Use
- Reschedule Nonessential Driving
- Refuel Before 10AM or after 6PM
- Promote Wichita Transit and Carpooling
- No Idling Policy (Reminders)
- Encourage employees
 - Pack a lunch
 - Teleconference
 - Save energy

Airport Ozone Alert Response Plan



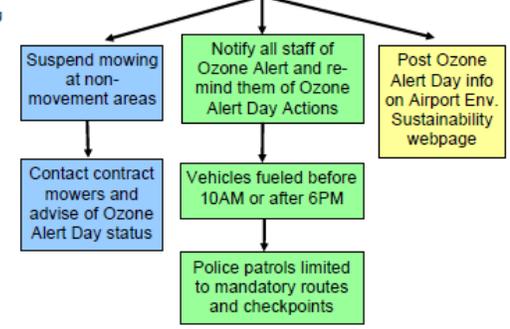
Timeline

- Each Weekday Morning
 - Air Quality will assess conditions and forecast ozone levels for the next day
- If conditions indicate a high ozone day an Ozone Alert will be issued by 1pm. Giving departments necessary time to notify workgroups
- Operating departments will receive Ozone Alerts via email
- Operating departments will be able to advise staff to implement Ozone Alert Actions the next day

Good Ozone Day	Ozone is low or moderate. No Ozone Alert. Operations as normal.
Ozone Alert Day	Ozone is predicted to be unhealthy for sensitive groups. Ozone Alert issued. Operations are adjusted.

Pre-Ozone Season, reminders sent to all staff about Ozone Season best practices — No Idling Policy, fuel when it's cool & reduce trips if possible

Ozone Alert Received by Designees via email



Sign up for City Departmental Ozone Alerts by contacting Baylee Cunningham at bcunningham@wichita.gov

Sign up for Ozone Alert Day emails at www.wichita.gov/ozone



Interested in creating an Ozone Action Plan?

Contact Baylee Cunningham

bcunningham@wichita.gov

(316) 268-8351

What Can You Do?

- ✓ Postpone fueling
- ✓ Reschedule errands
- ✓ Postpone lawn work
- ✓ Avoid using paints, varnishes and solvents in the heat of the day
- ✓ Limit idling
- ✓ Signup for Ozone Alerts
- ✓ Carpool, ride the bus, bicycle or walk
- ✓ Create and Ozone Action Plan for your organization
- ✓ Follow us on Twitter and Instagram
@BeAirAwareKS

Questions?

