

A photograph of a flock of birds, likely geese or swans, flying in a clear blue sky. The birds are scattered across the frame, with some in the foreground and others further back. The background shows a faint horizon line with trees.

THE STATE OF THE AIR IN ARKANSAS

Image Source: Arkansas Department of Parks and Tourism

Overview

ADEQ Office of Air Quality

A photograph of a modern, curved glass building with a stone base, surrounded by trees and a clear blue sky. The building's facade is composed of numerous horizontal glass panels, creating a rhythmic pattern. The stone base is visible at the bottom of the building. Two young trees are in the foreground, one on the left and one on the right. The sky is bright blue with some light clouds.

Change is in the Air
At the Office of Air Quality

Efficiencies and Improvements in the OAQ

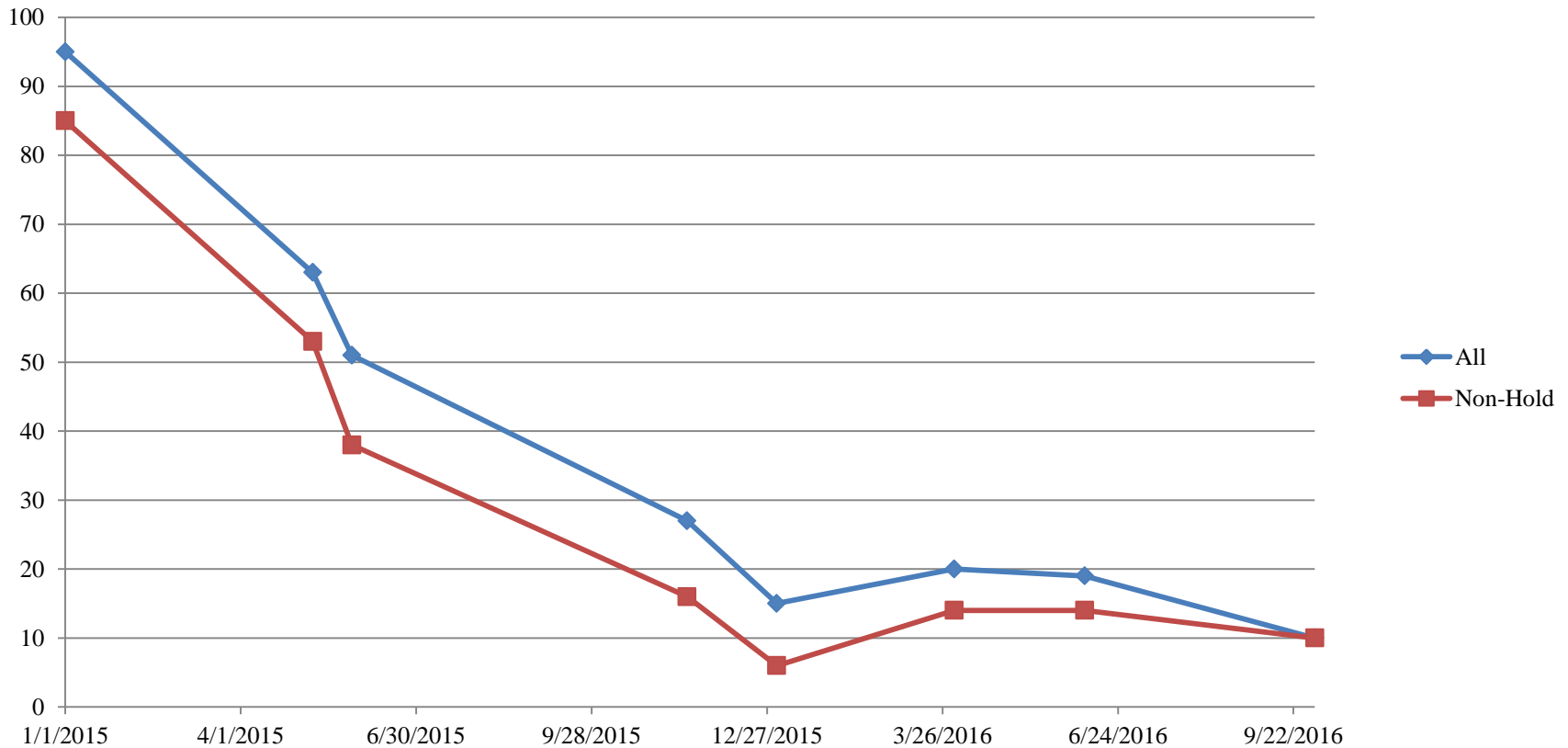
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- The Office of Air Quality (OAQ) has realized efficiencies and enhanced productivity as it carries out its mission of protecting and improving air quality in Arkansas
 - Faster Permitting Time
 - Excellence in Compliance Monitoring

Going, going, gone!

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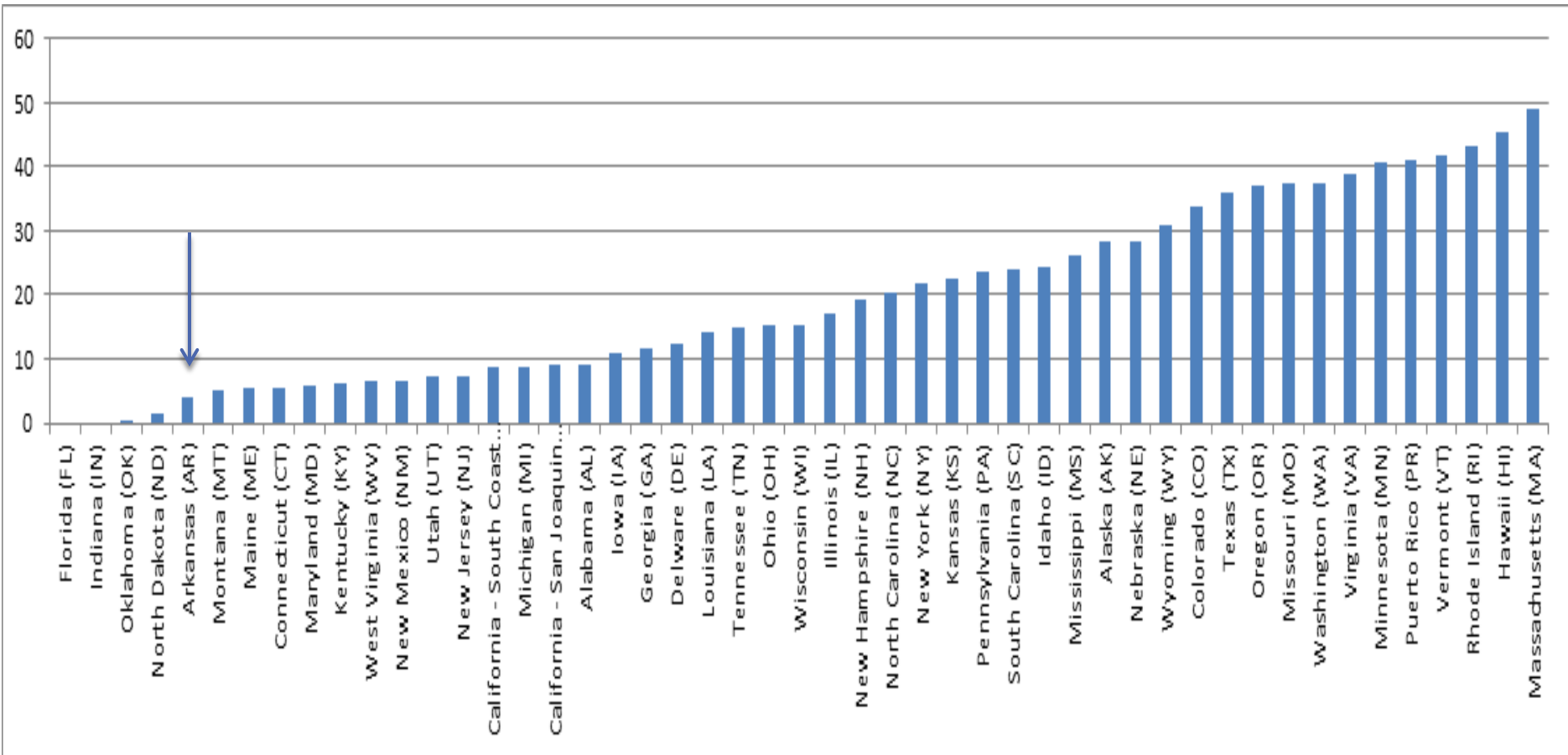
Permits In-House >180 Days



Title V Renewal Backlog Rankings for Permitting Authorities with Greater than 100 Title V Sources

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- Vertical axis= percent of backlogged permits



Excellence in Compliance Monitoring

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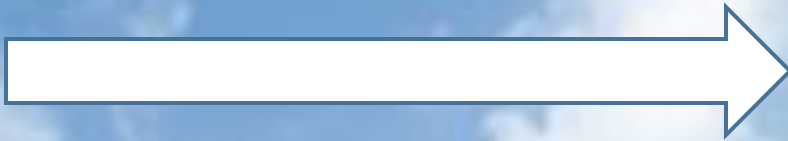
- Inspectors are the eyes and ears of the OAQ
 - Serve as **observers, educators, and reporters** of compliance

- 10/1/2015 – 9/30/2016
 - Performed **794** Inspections
 - Investigated **409** Complaints
 - Reviewed **620** Stack Tests

Arkansas Air is Excellent

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Criteria pollutants



All areas are in attainment with federal national ambient air quality standards (**NAAQS**).

- **Ozone**
- **Particulate matter**
- **Carbon monoxide**
- **Lead**
- **Sulfur dioxide**
- **Nitrogen dioxide**

Arkansas Trends

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- **Continued reductions in air pollutant emissions and ambient concentrations** through state and federal programs.
- **Arkansas is on target** to meet or beat other Clean Air Act goals, for Regional Haze and Carbon Dioxide.

Criteria Pollutants



Image Source: Arkansas Department of Parks and Tourism

Ozone

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- Ozone concentrations have declined.
- Crittenden County is back in attainment:
 - ▣ for the 1997 ozone standard in 2010
 - ▣ for the 2008 ozone standard in 2016

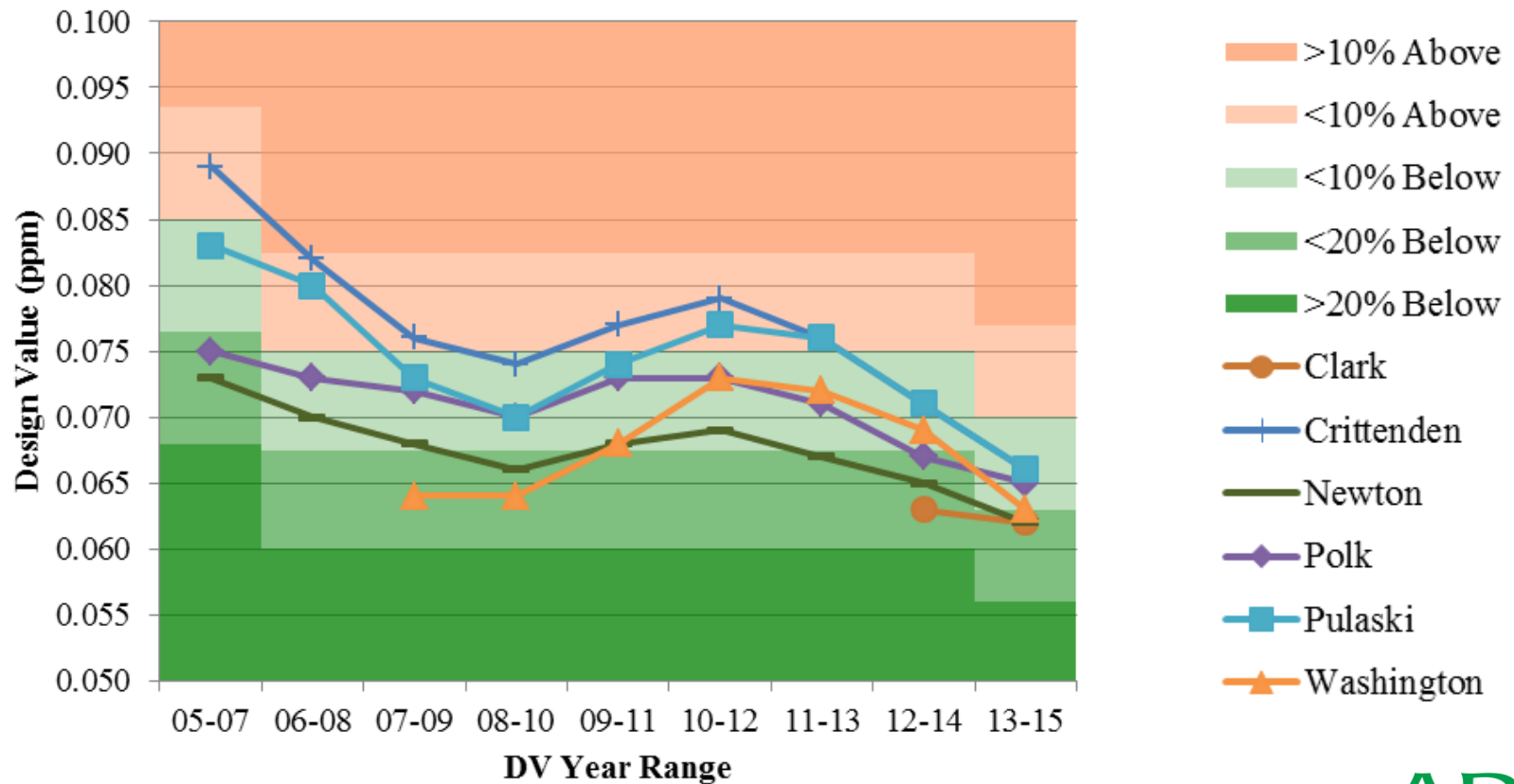
Monitors also located in Clark,

✓ Crittenden, Newton, Polk, Pulaski, and Washington counties



Ozone 8-Hour NAAQS Design Values

Ozone concentrations have declined even as NAAQS stringency has increased.



2015 Ozone Standard Designations

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- October 26, 2015 – EPA tightens the ozone standard to **70 ppb**
- Governor's Designation Recommendation:
 - **All counties either “attainment” or “unclassifiable/attainment”**
 - Based on 2013 – 2015 data

Fine Particulate Matter (PM_{2.5})

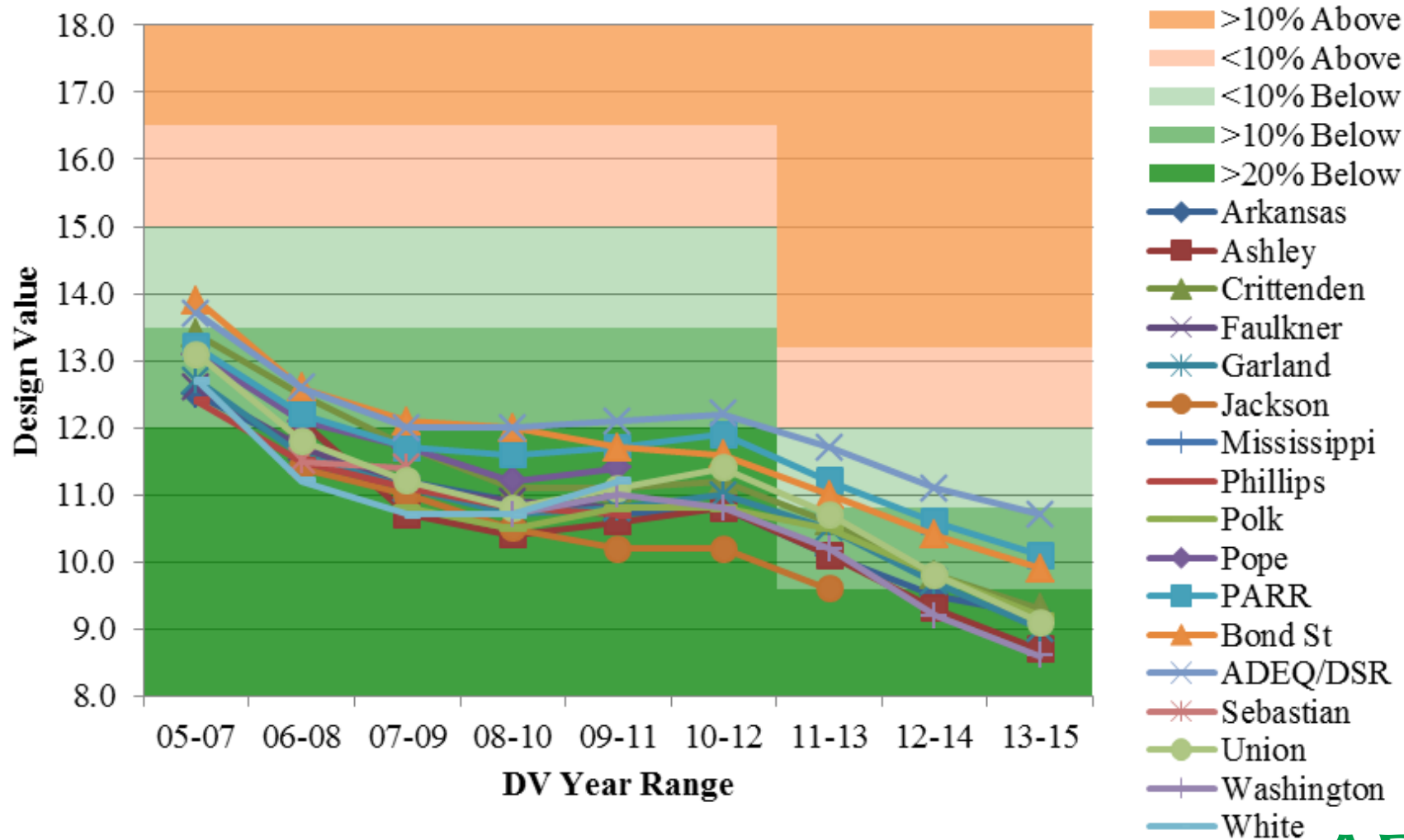
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- ✓ Monitors are located in Arkansas, Ashley, Crittenden, Jackson, Polk, Pulaski, Washington, Union counties and in Roland, OK.

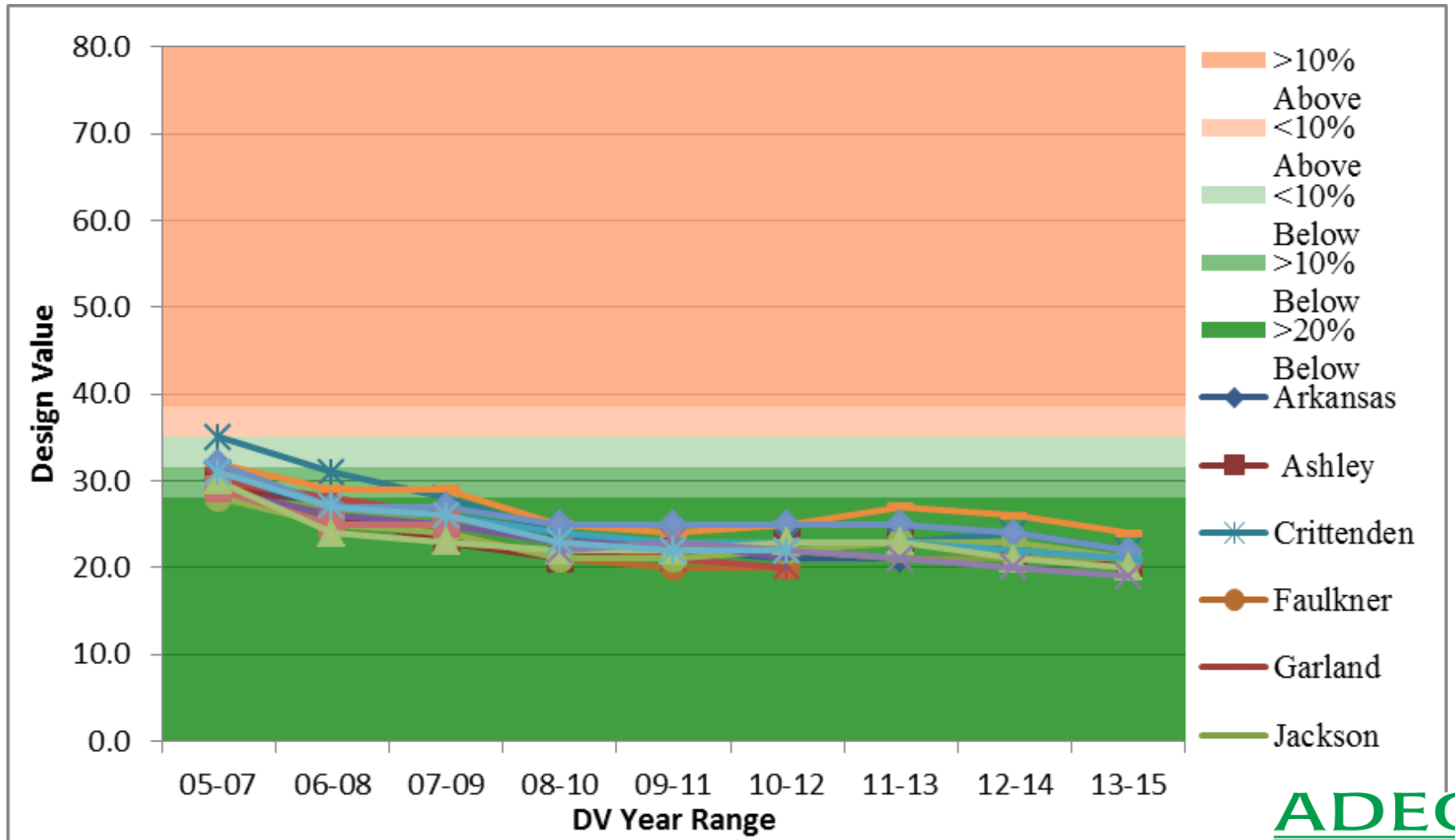
PM_{2.5} Annual NAAQS Design Values at Arkansas Monitors

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PM_{2.5} 24-Hour Design Values at Arkansas Monitors

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Well Below NAAQS Limits

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- **Carbon Monoxide**
monitor in Pulaski County
- **Nitrogen Oxides**
monitors in Crittenden,
Pulaski counties
- **Sulfur Dioxide**
monitors in Pulaski, Union
counties
- **PM₁₀**
monitor in Pulaski County
- **Lead**
monitor in Pulaski County



Emissions Inventory

Emissions and Sources



Sources

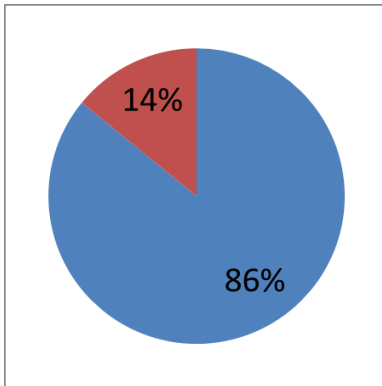
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- Point – larger stationary sources
- Nonpoint – residential heating, solvents, agriculture, road dust
- Biogenic – crops, lawns, trees, soils
- Onroad – passenger vehicles, trucks, buses
- Nonroad – aircraft, locomotives, marine vessels
- Event – wildfires, prescribed burns



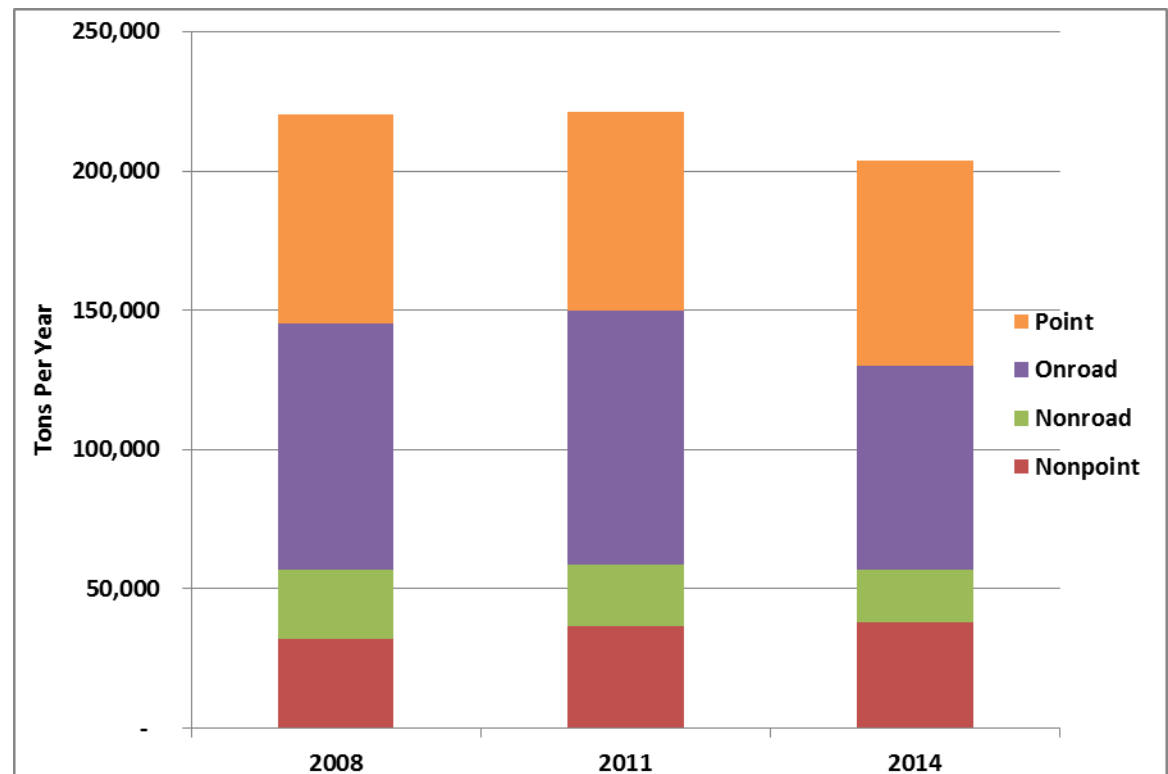
Nitrogen Oxides (NO_x)- Arkansas EI

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■ Regulated Sources
■ Other Sources

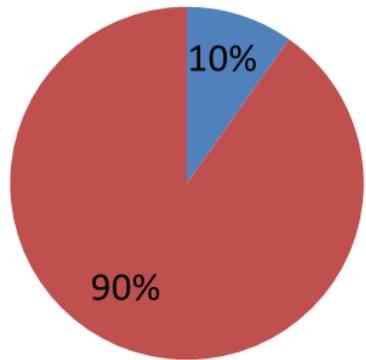
- Precursor for NO₂, Ozone and PM_{2.5}
- Primarily emitted by mobile sources



- Regulated sector NO_x emissions decreased between 2008 and 2014

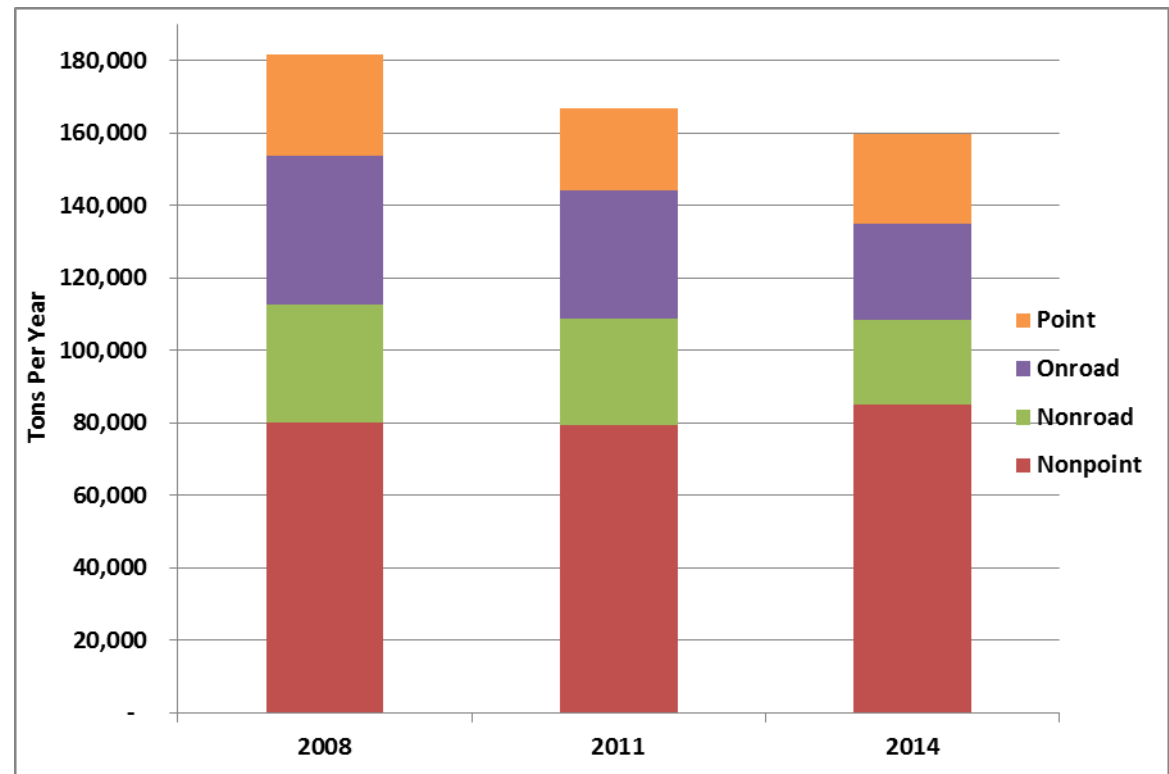
Volatile Organic Compounds (VOCs)- Arkansas EI

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■ Regulated Sources
■ Other Sources

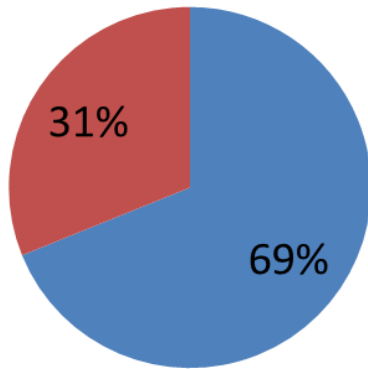
- Precursor for Ozone
- Primarily emitted by biogenic sources



- Regulated sector VOC emissions decreased between 2008 and 2014

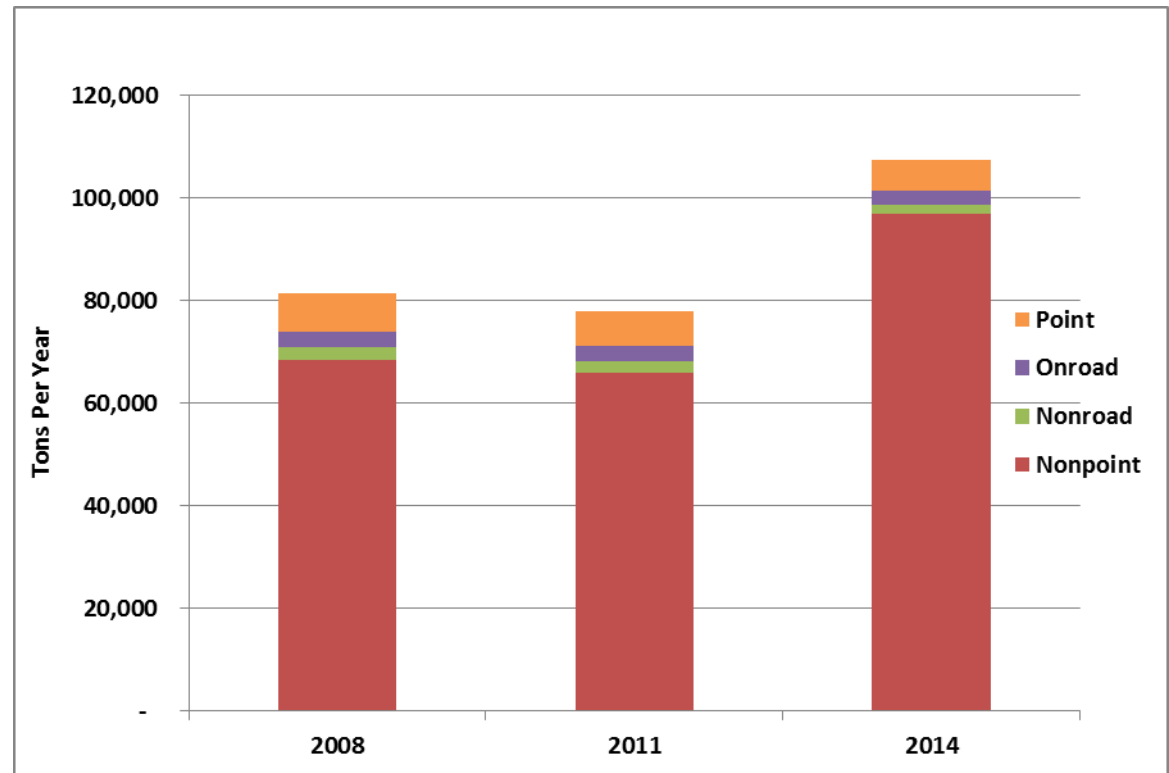
Direct Fine Particulate Matter (PM_{2.5}-Pri)- Arkansas EI

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■ Regulated Sources
■ Other Sources

- Small fraction of total ambient PM
- Fire is largest contributor of PM_{2.5}-Pri



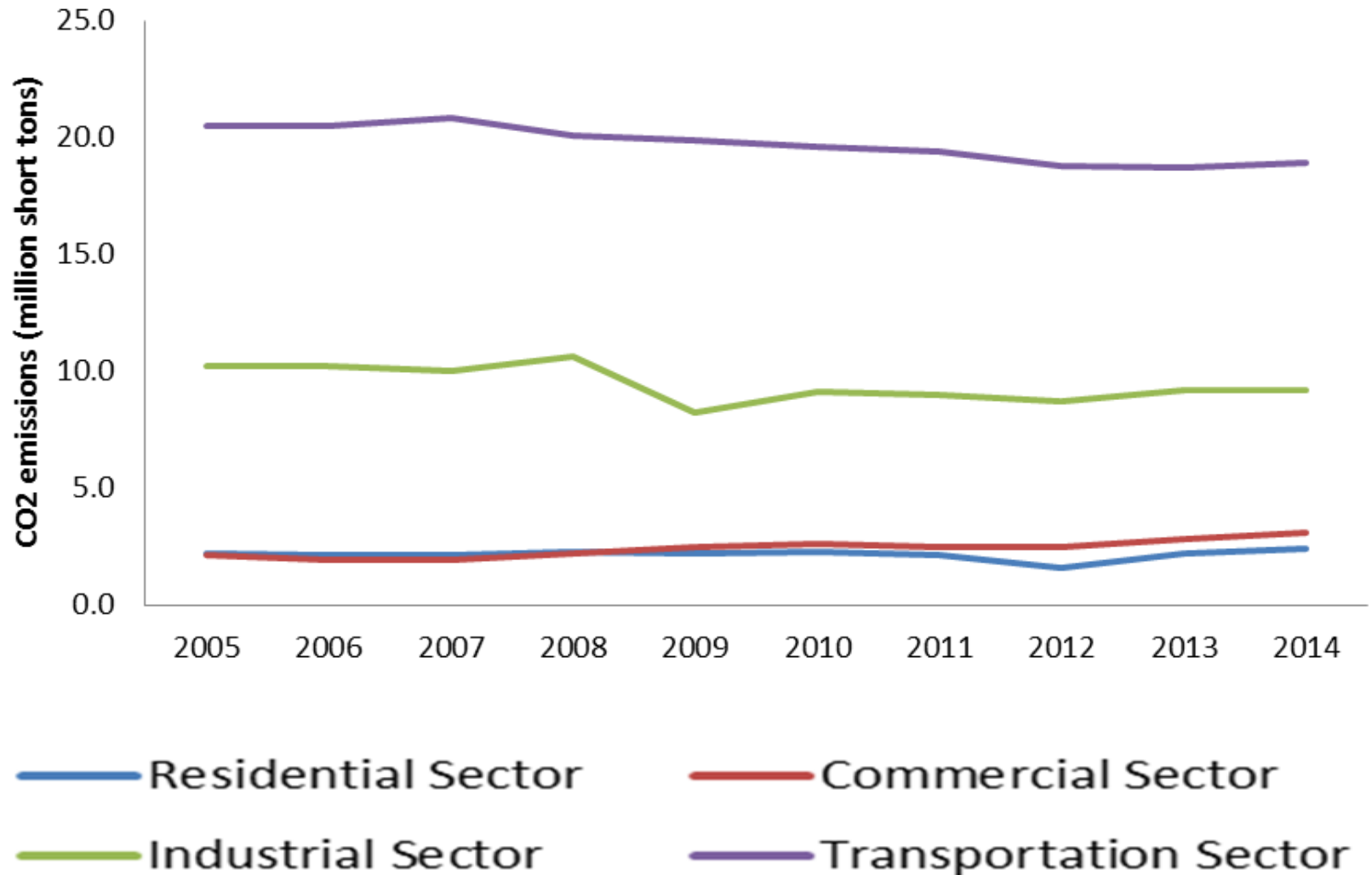
- Regulated sector PM_{2.5}-Pri emissions increased between 2008 and 2014

Carbon Dioxide Emissions Trends



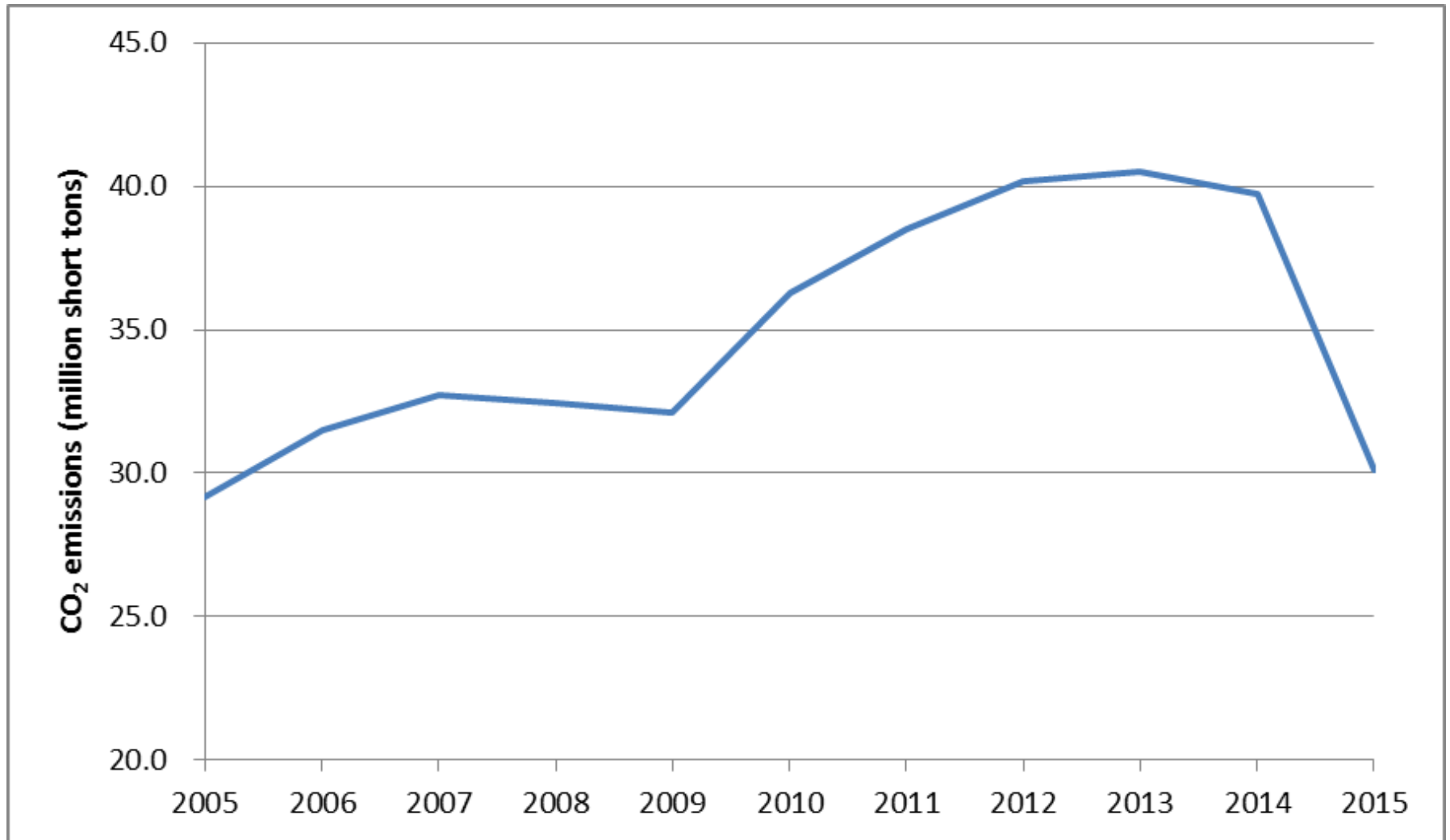
Carbon Dioxide Emissions Trends by Sector

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Carbon Dioxide Emissions Trends by Electricity Sector

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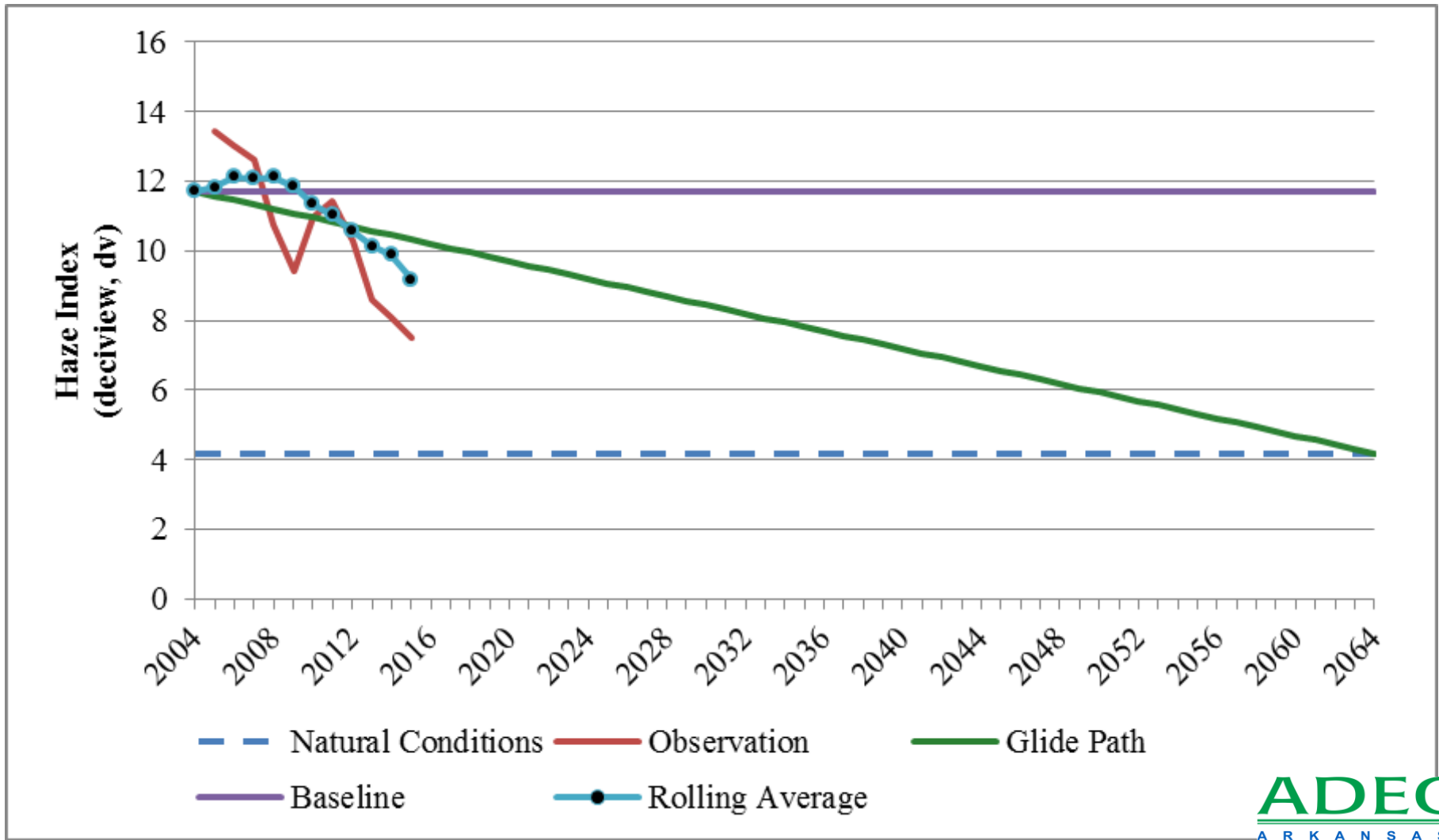
Regional Haze

Visibility Trends

Image Source: National Park Service

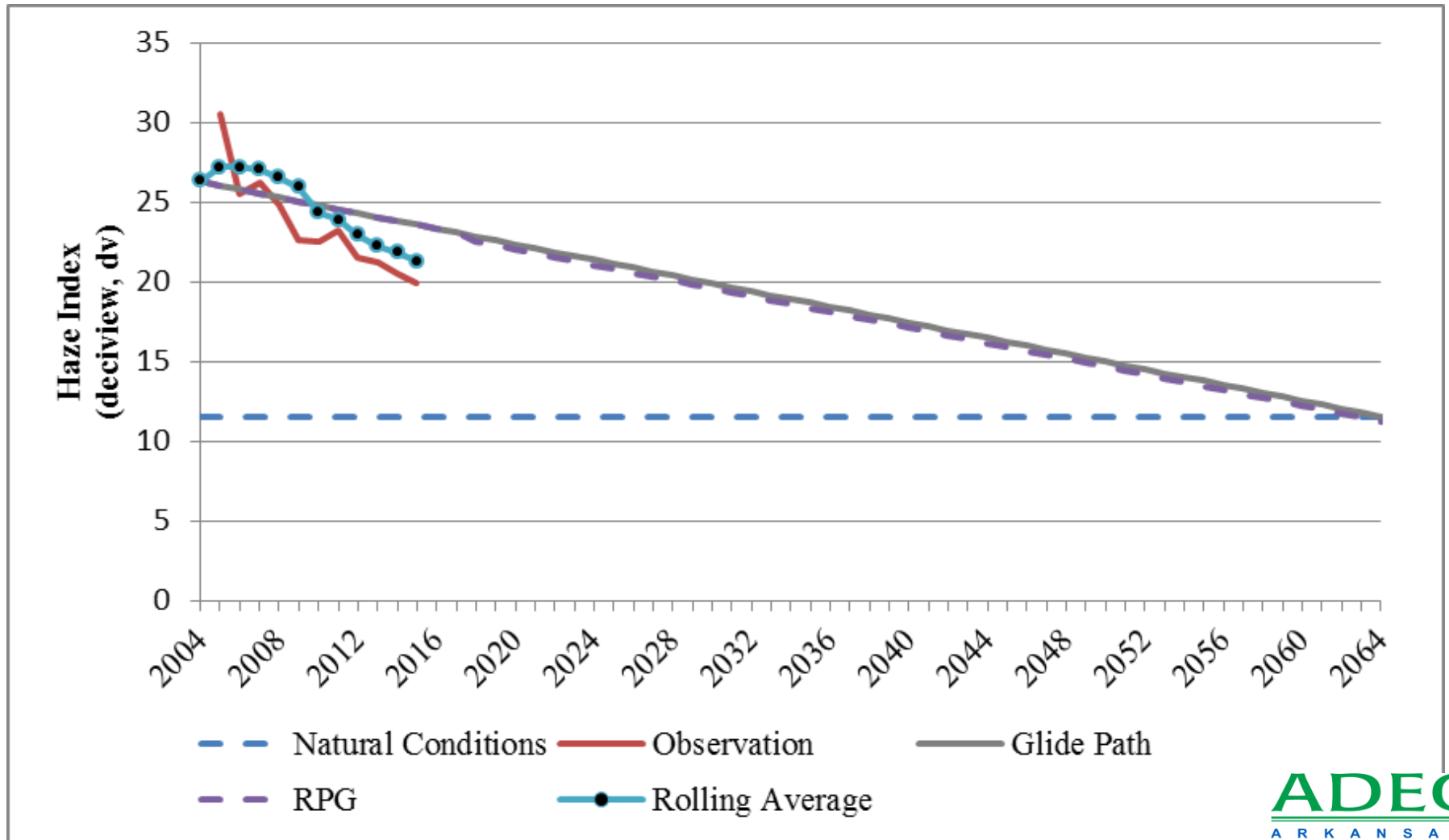
Reasonable Progress Assessment – 20% Best Days Upper Buffalo Wilderness Area

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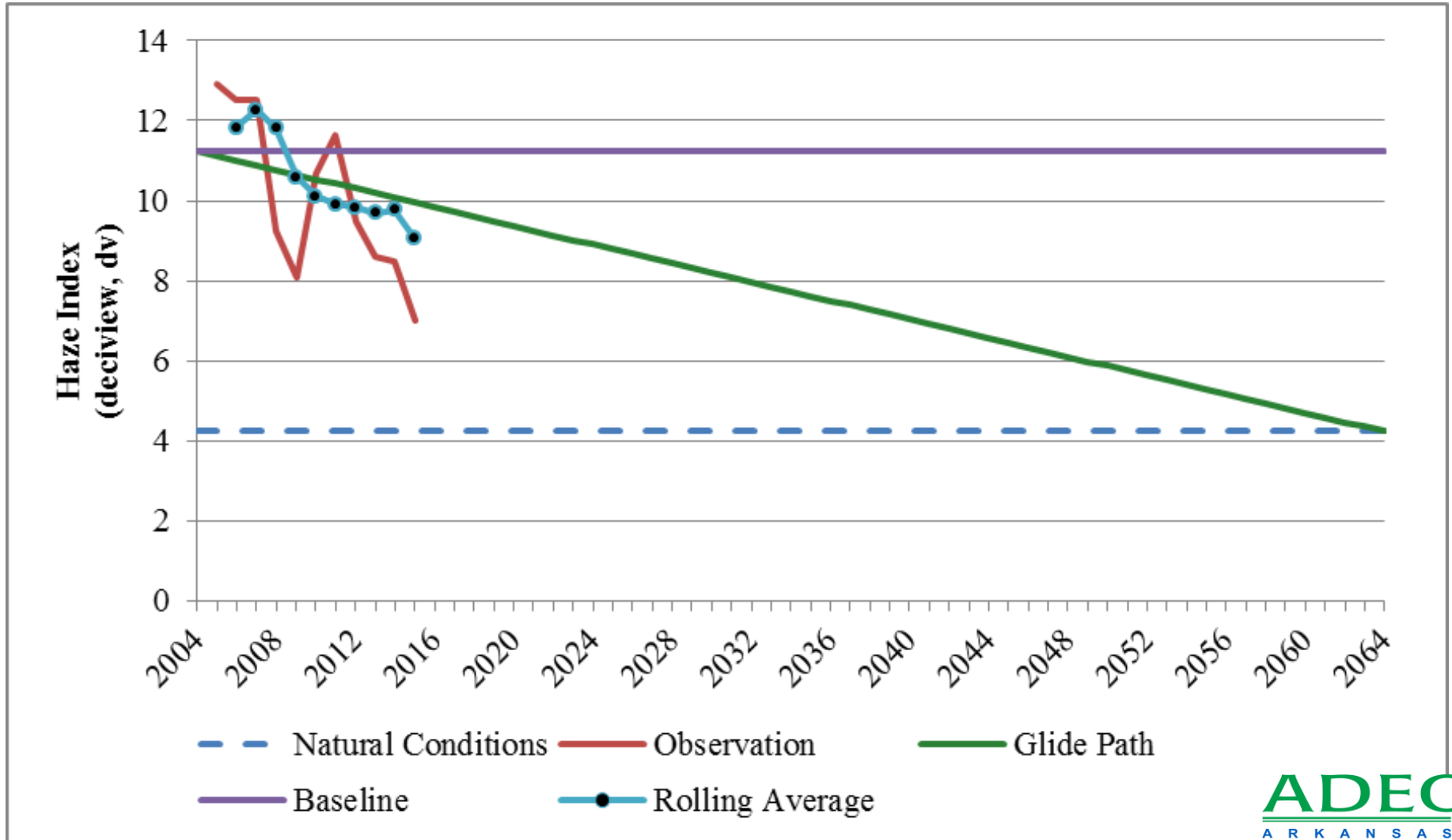


Reasonable Progress Assessment – 20% Worst Days Upper Buffalo Wilderness Area

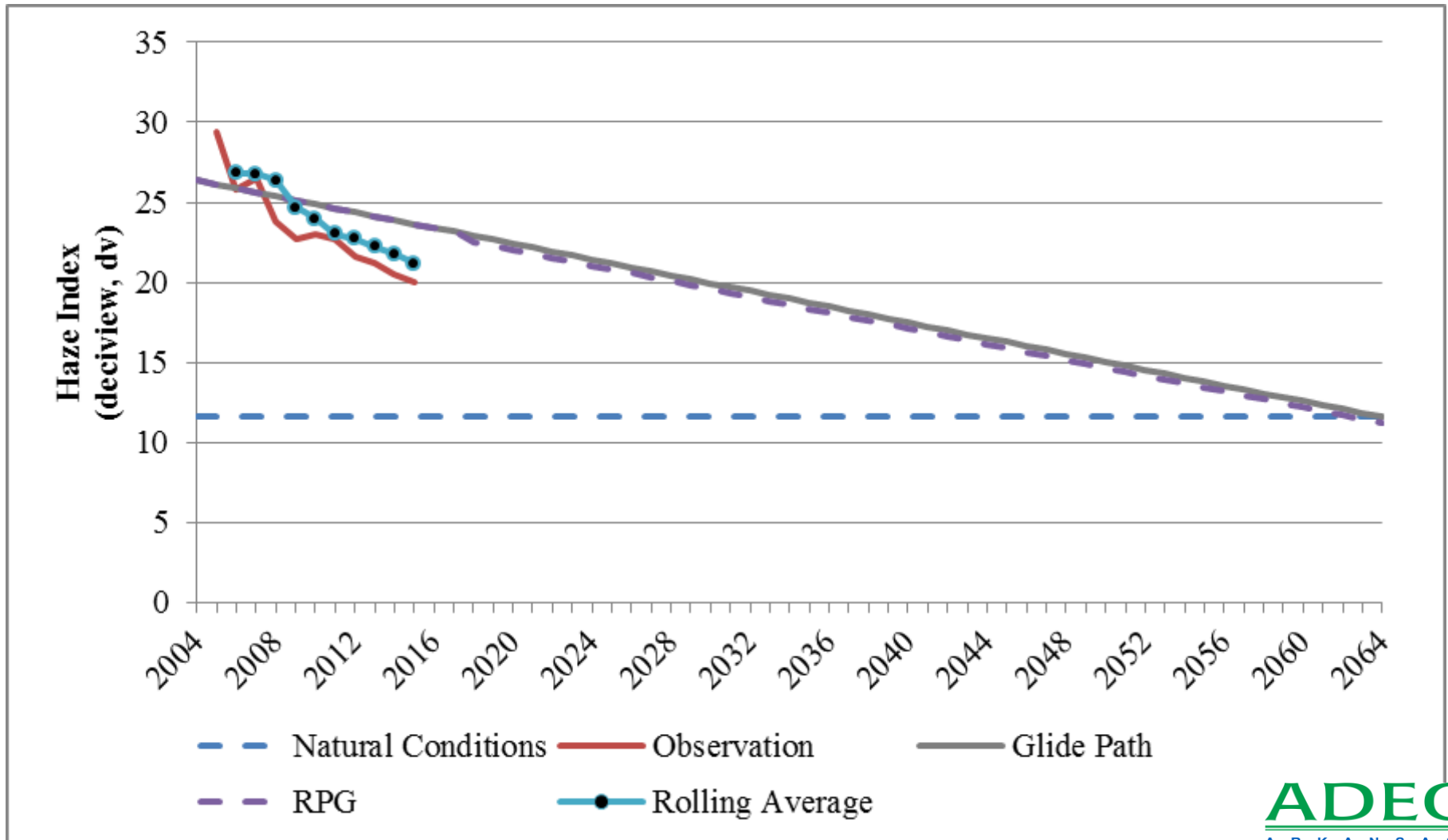
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Reasonable Progress Assessment – 20% Best Days Caney Creek Wilderness Area



Reasonable Progress Assessment – 20% Worst Days Caney Creek Wilderness Area



Conclusion

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- Air quality in Arkansas is among best in USA.
- Arkansas is one of only 13 states with no non-attainment areas.
- Air quality improvements are likely to continue due to implementation of state and federal programs.
- ADEQ is continuing to realize efficiencies and improvements as it carries out its duty of protecting and improving air quality in Arkansas.

See the full report at

www.adeq.state.ar.us Hot Topics*