STATE AIR QUALITY STATUS UPDATE

Valley AIRNow Task Force Meeting

November 7, 2007

Air Quality Update - Topics

- Eight-hour Ozone
- Fine Particulate Matter
- Visibility Improvement
- Climate Change

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Ozone Early Action Compact

- Established in Dec 2002
- Plan developed in 2004
- All state & local controls implemented
- Status reports every six months
- Result – A Great Success!
- Final EPA determination - April 2008

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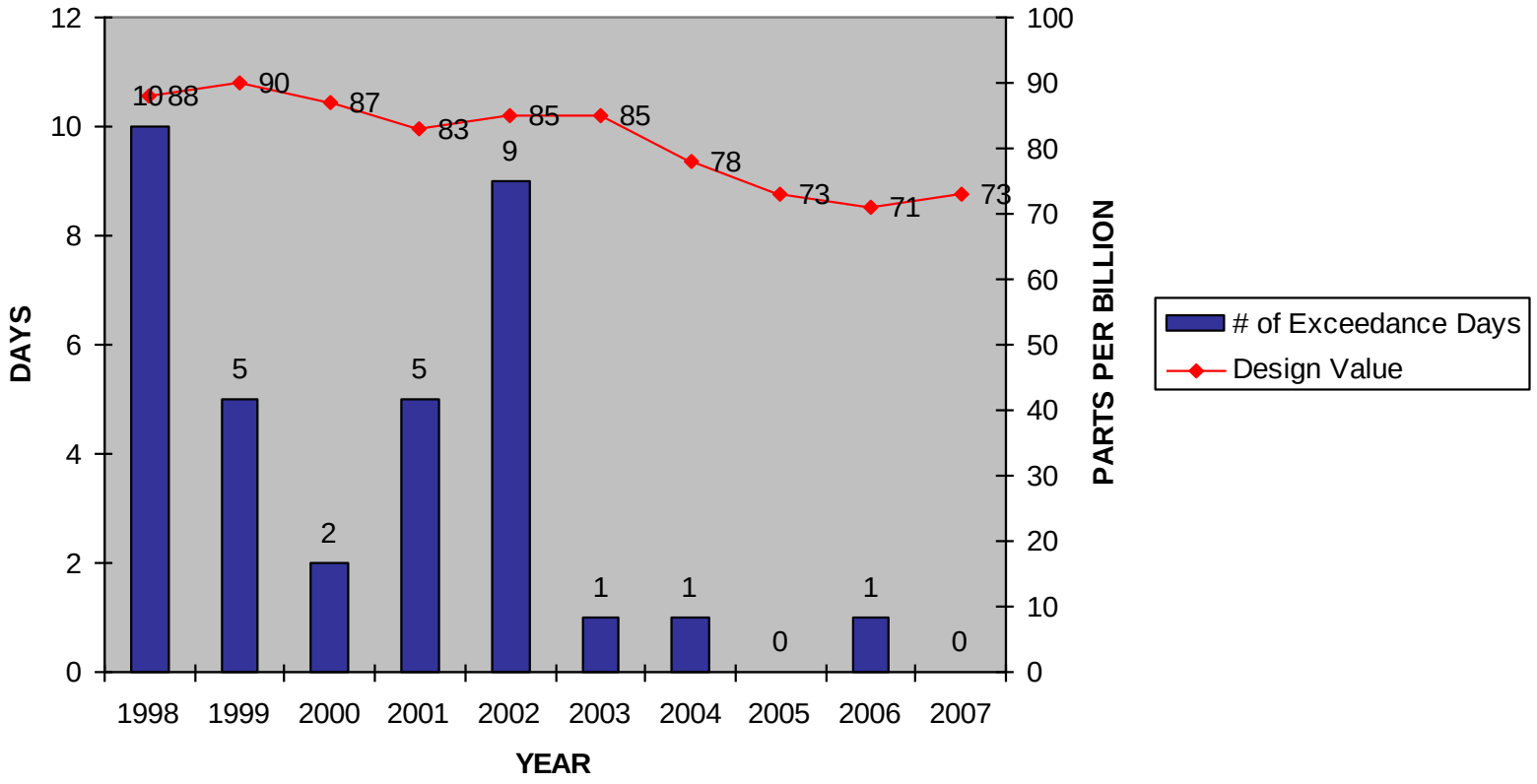
Measure of Success

Northern Shenandoah Ozone Trends



Current 8 Hour Standard: 85 ppb

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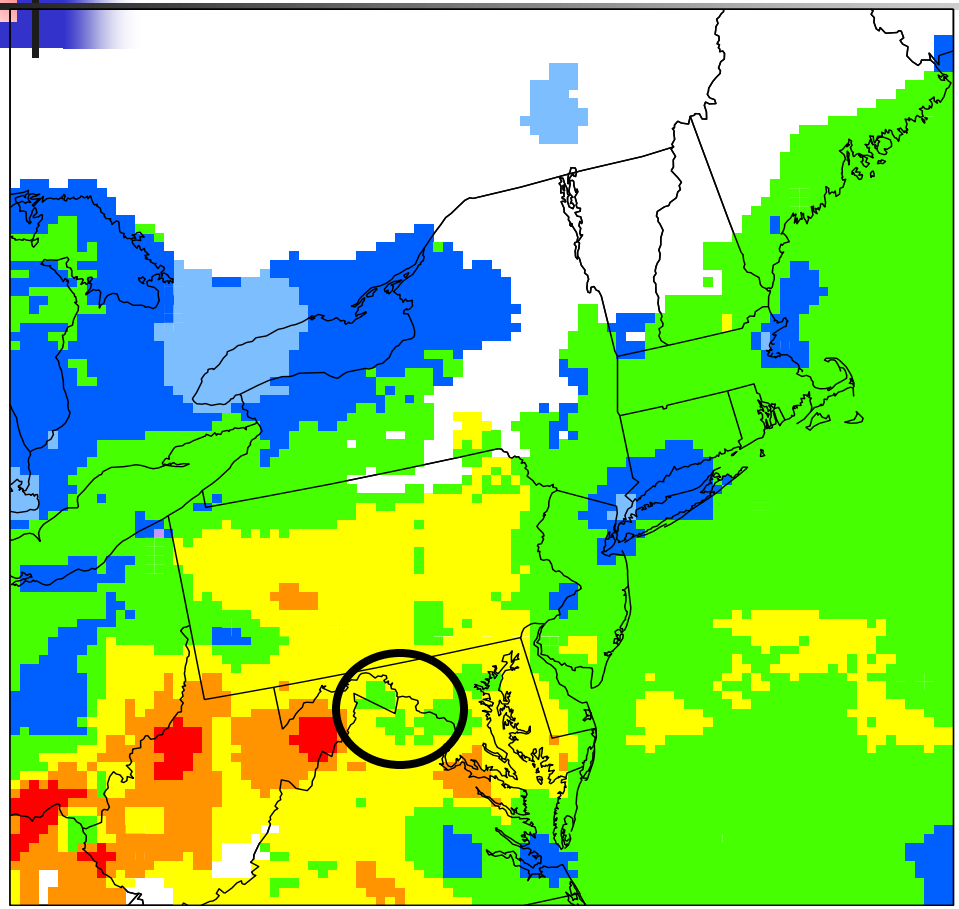
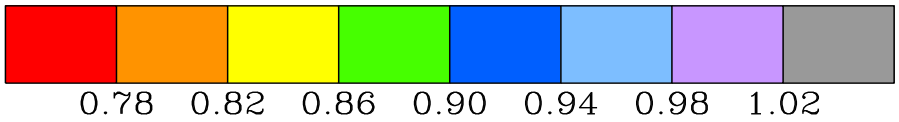
Eight-Hour Ozone Standard

Future Modeling Results





- 12% ozone reduction in ozone in NSV by 2009
- 21% reduction by 2018
- Predictions:
  - 72 ppb in 2009
  - 65 ppb in 2018

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Eight-Hour Ozone Standard
Emissions Reduction Programs

- Regional transport reductions
  - Utility NO_X controls
- Federal motor vehicle standards
  - Tier 2 vehicle standards
  - Heavy duty truck standards
- Nonroad engine standards
  - Small engines
  - Heavy duty diesel Equipment
- Local control measures
  - Early Action Compact & Plan

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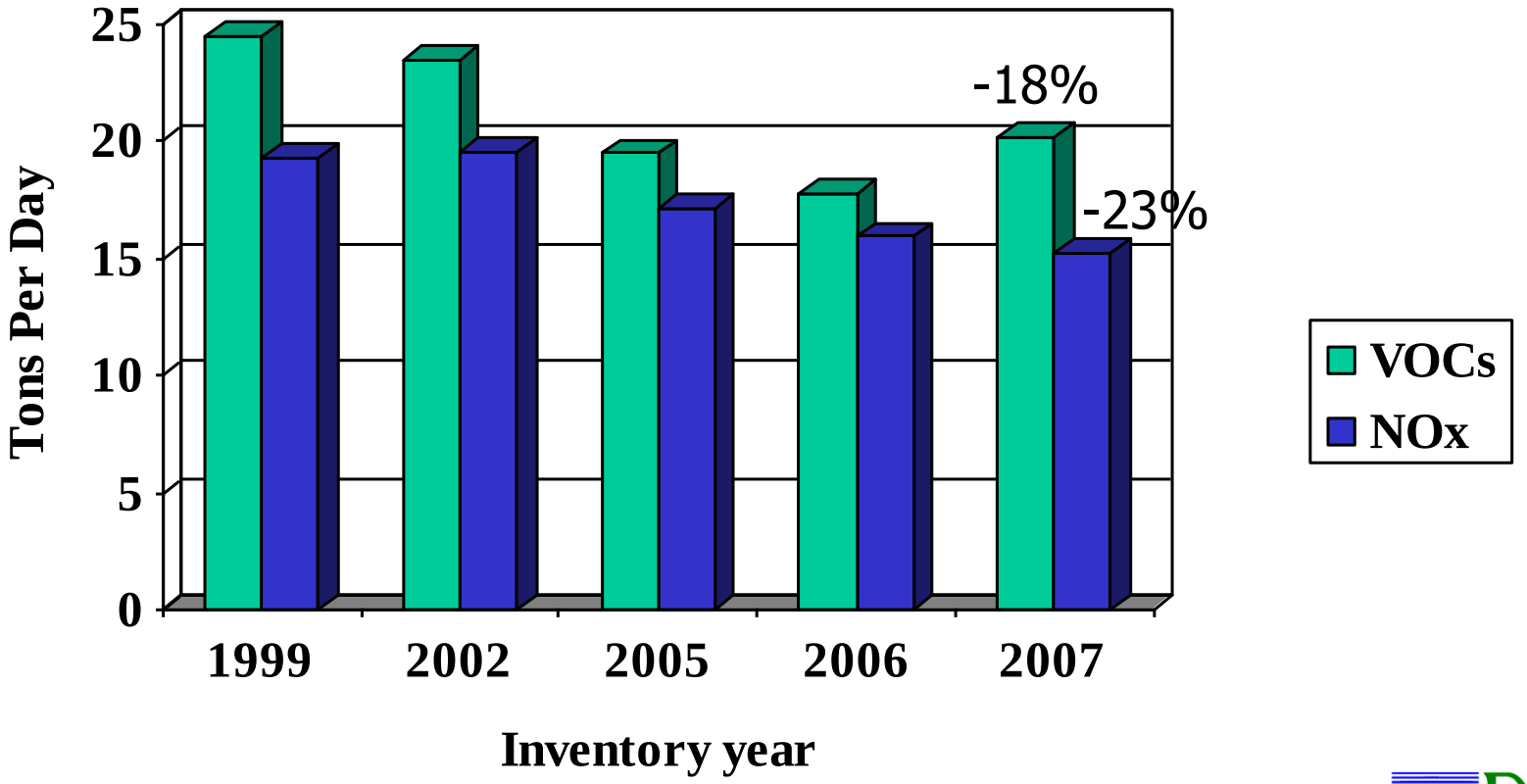
Eight-Hour Ozone Standard

Local NSV Emission Reductions



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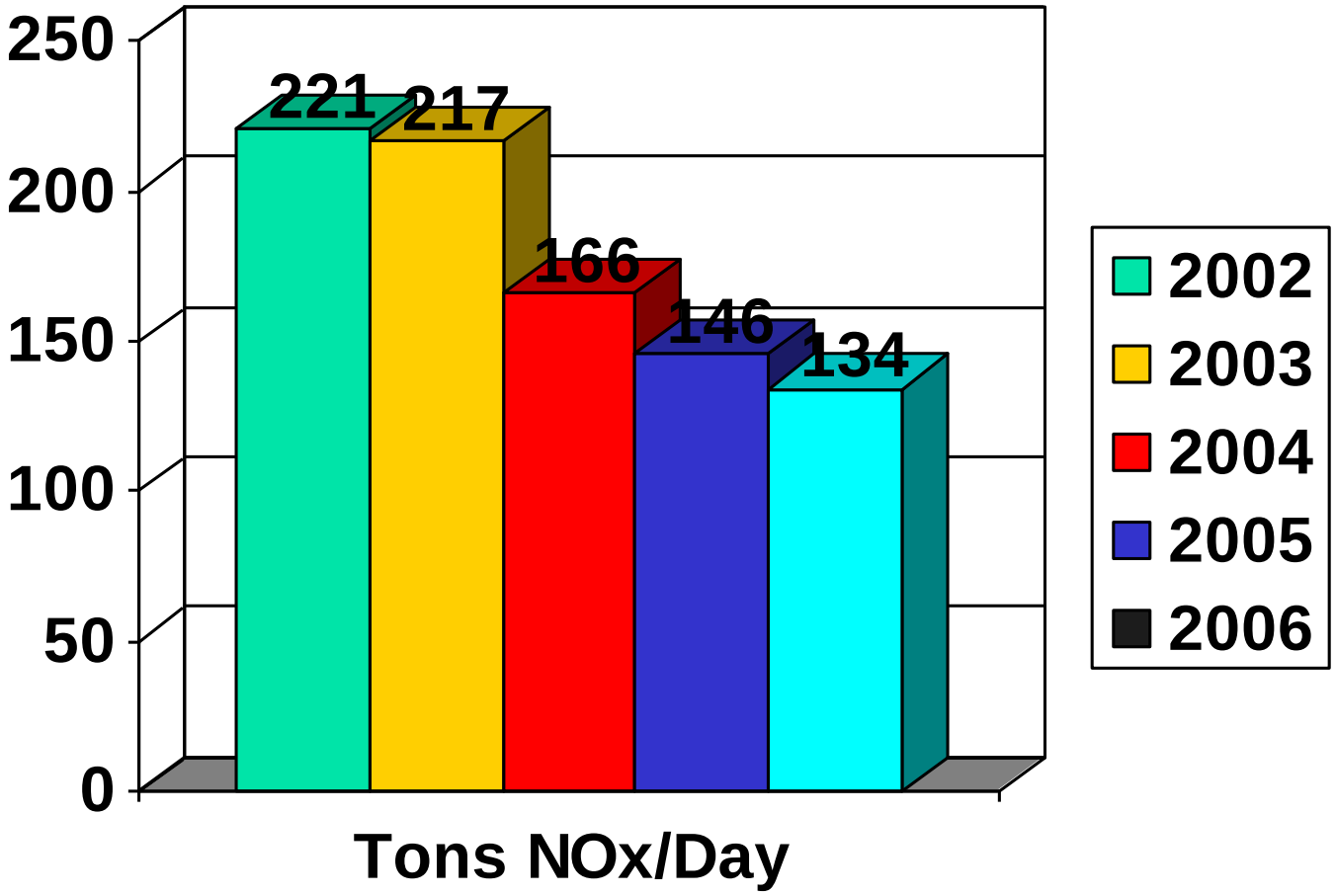
Eight-Hour Ozone Standard

Power Plant NO_X Reductions in VA



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New Ozone Standard Proposal

- Result of EPA standard review
- Proposal Range – 60 to 85 ppb
- Impact on NSV area is uncertain
- Final rule in June 2008
- Area designations in 2010
- SIPs due in 2013

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Fine Particulate Matter Standard
Air Quality Update

- Two standards in place
  - Annual – 15 micrograms per cubic meter (ug/m_3)
  - 24 Hour - 35 ug/m_3
- Multi-pollutant problem
- Main cause – secondary sulfates & nitrates
- PM2.5 monitor startup is imminent
- Annual standard under litigation
- Significant reduction expected – 12.3 ug/m_3 by 2018

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PM2.5 Standards

Berkley Co. WV Monitoring Trends

YEAR	***Annual***	***24 Hour***
2003	16.2 ug/m_3	35.7 ug/m_3
2004	15.4 ug/m_3	34.4 ug/m_3
2005	16.9 ug/m_3	37.3 ug/m_3
2006	14.9 ug/m_3	31.4 ug/m_3
Design Value	15.8 ug/m_3	34.3 ug/m_3

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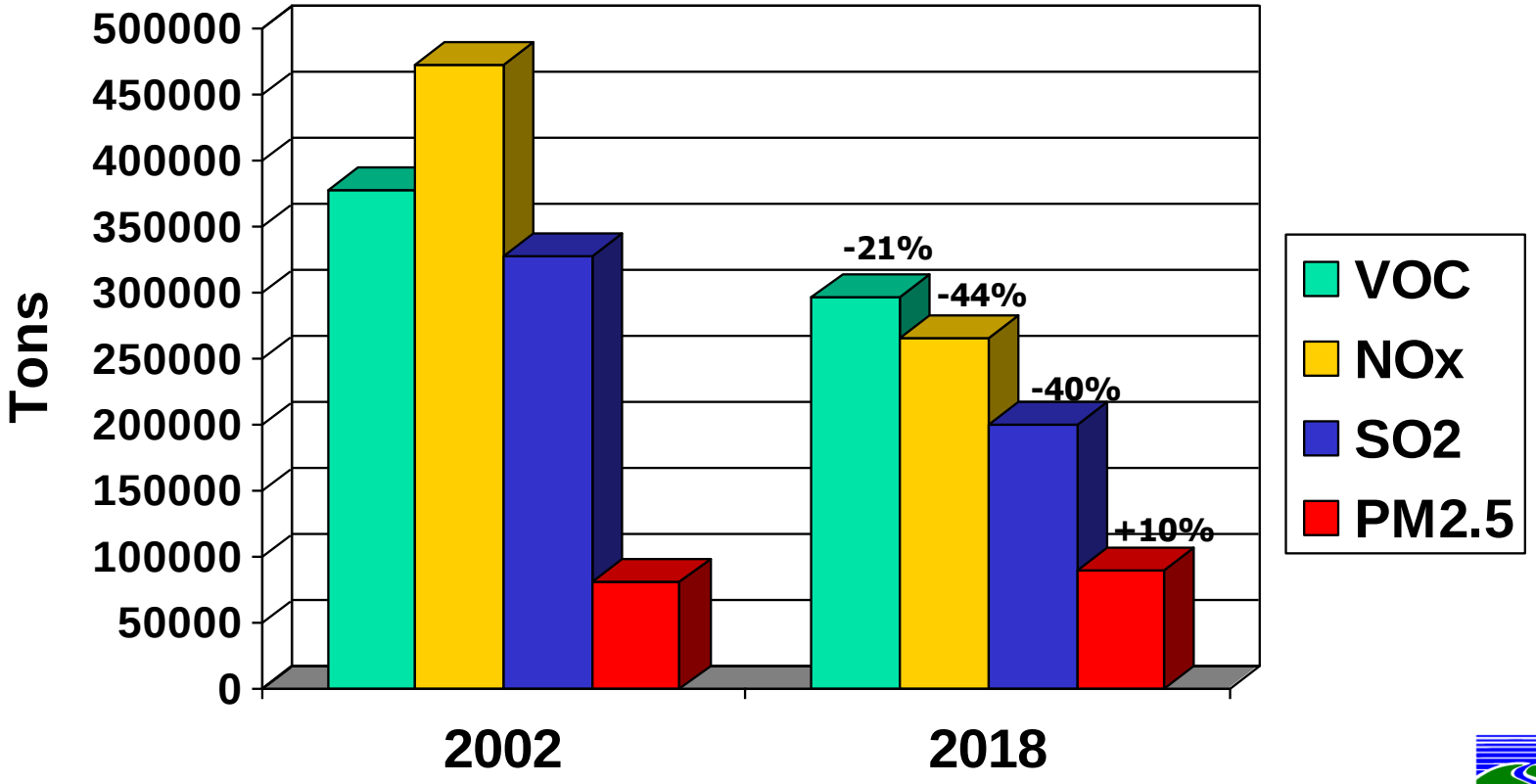
Emissions Reduction Predictions

Total VA Emissions – 2002 and 2018



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Visibility Improvement Program
Current Planning Activities

- Program to improve regional visibility
- Achieve natural conditions by 2064
- Again mainly a sulfate problem
- First SIP due in December (to 2018)
- Controls included:
  - 60% reduction in SO_2 from VA utilities
  - Source specific controls – Westvaco plant
  - Low sulfur gasoline
- Significant improvement is expected

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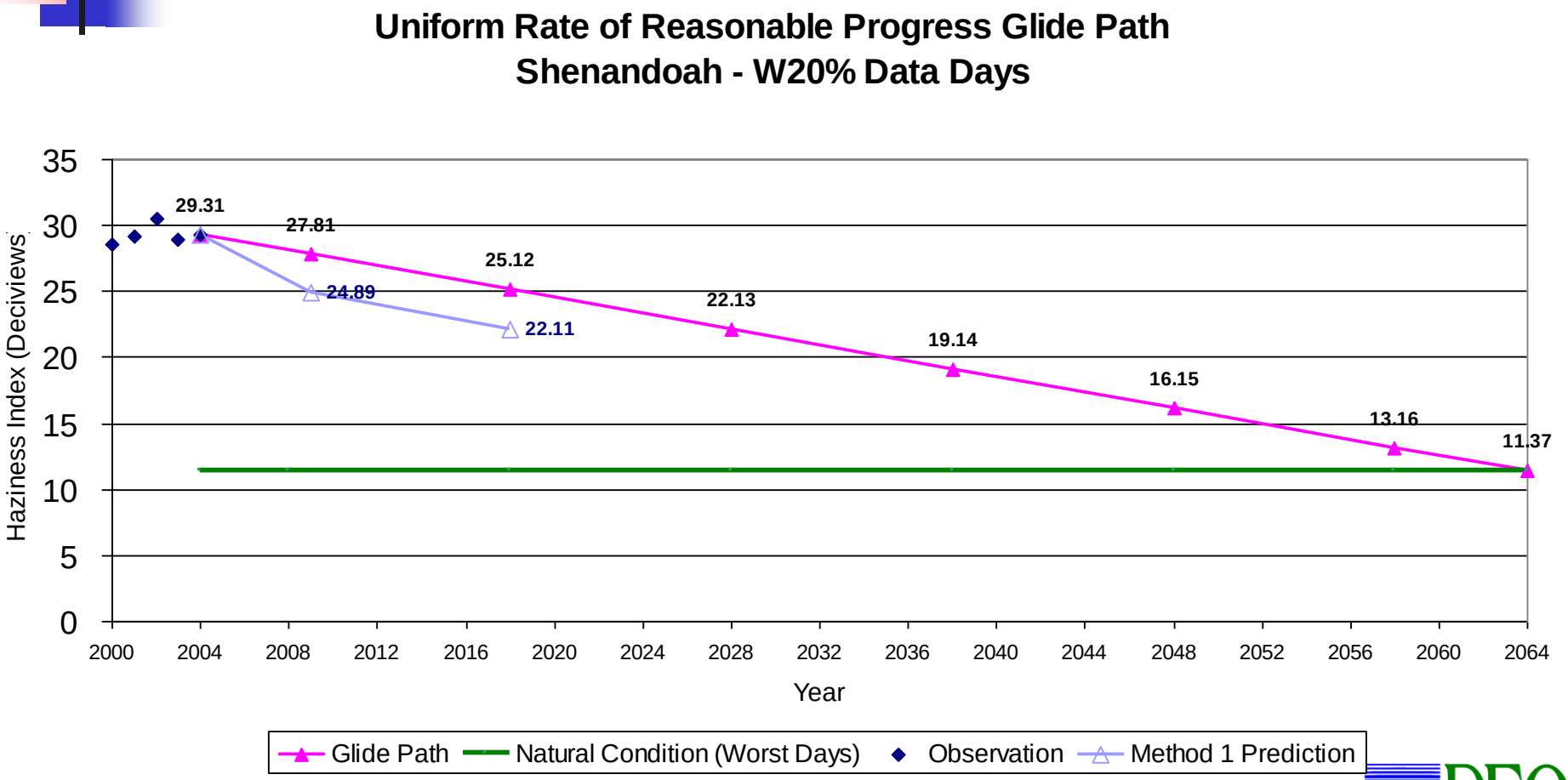
Visibility Improvement Program

Predicted Improvement - Shenandoah



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NSV Air Quality Update
Climate Change Initiatives

- Virginia energy plan
  - Reduce energy growth by 40%
  - Reduce greenhouse emissions 30%
  - Increase in-state energy production by 20%
- Climate Registry
  - Multi-state effort
  - Develop consistent reporting process
  - Model for federal system & trading program?
- Executive Order 48
  - Reduce state agency and facility energy use

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NSV Air Quality Update
Summary

- Much progress seen with ozone
- Visibility also improving
- $PM_{2.5}$ status to be determined
- All three predicted to improve in the future
- Maintain ozone EAP efforts

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