Update on Reasonable Progress Goals

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Baseline Conditions, Natural Conditions, Uniform Progress and Reasonable Reductions

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Technical SIP Needs

• Reasonable Progress Goals
• Baseline and Natural Visibility Conditions
• Long Term Strategy
  – (including inventory, modeling, pollution apportionment, control measures, smoke management plan, and BART)
• Monitoring strategy
Technical SIP Needs

- Reasonable Progress Goals
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- Monitoring strategy

Uniform Progress Goals
## Monitoring Data: Baseline Conditions/Uniform Progress

### Natural Background and Baseline calculations for Select Class I areas

<table>
<thead>
<tr>
<th>Site</th>
<th>Natural Background (DV)</th>
<th>Baseline 2000-03 (DV)</th>
<th>Uniform Rate (DV/year)</th>
<th>Interim Progress Goal 2018 (DV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acadia</td>
<td>11.45</td>
<td>22.25</td>
<td>0.18</td>
<td>19.73</td>
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<tr>
<td>Brigantine</td>
<td>11.28</td>
<td>27.78</td>
<td>0.28</td>
<td>23.93</td>
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<tr>
<td>Lye Brook</td>
<td>11.25</td>
<td>23.73</td>
<td>0.21</td>
<td>20.82</td>
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<tr>
<td>Moosehorn</td>
<td>11.36</td>
<td>20.91</td>
<td>0.16</td>
<td>18.68</td>
</tr>
<tr>
<td>Shenandoah</td>
<td>11.25</td>
<td>28.11</td>
<td>0.28</td>
<td>24.18</td>
</tr>
</tbody>
</table>
Uniform Progress Goals
(20% Worst Visibility Days)

Regional Haze

![Graph showing trends in visibility (DV) over years for different locations.

Almost 4 DV

2-3 DV

Year

Visiblity (DV)
Uniform Progress Goals
(20% Best Visibility Days)

Regional Haze

Year
1990 2005 2020 2035 2050 2065

Visibility (DV)
0 3 6 9 12 15 18

Acadia
Brigantine
Lye Brook
Moosehorn
Shenandoah
What is reasonable to control??
(Example: Brigantine, NJ)

Sulfates and Nitrate Based Control Program
1.26 µg/m³
Mass Reduction

Control All Components In Proportion
1.46 µg/m³
Mass Reduction

Baseline Conditions
Median Day (8.4 µg/m³)
Same transport region??

Transport region on 10% worst sulfate days at Brigantine, NJ

Transport region on 10% worst organic carbon days at Brigantine, NJ
Alternative strategies for achieving uniform progress by 2018

Proportional reductions in sulfate and nitrate only, or …

<table>
<thead>
<tr>
<th>Location</th>
<th>Median Day (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acadia</td>
<td>.33</td>
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<tr>
<td>Brigantine</td>
<td>1.26</td>
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<tr>
<td>Lye Brook</td>
<td>.40</td>
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<tr>
<td>Moosehorn</td>
<td>.33</td>
</tr>
<tr>
<td>Shenandoah</td>
<td>1.16</td>
</tr>
</tbody>
</table>

Proportional reductions in sulfate, nitrate, organic carbon and elemental carbon

<table>
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<tr>
<th>Location</th>
<th>Median Day (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acadia</td>
<td>.43</td>
</tr>
<tr>
<td>Brigantine</td>
<td>1.46</td>
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<tr>
<td>Lye Brook</td>
<td>.50</td>
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<tr>
<td>Moosehorn</td>
<td>.45</td>
</tr>
<tr>
<td>Shenandoah</td>
<td>1.33</td>
</tr>
</tbody>
</table>
Reasonable Progress Goals

• Goal for each Class I area (in dv) that must improve visibility on worst days and protect on the best days

• 4 criteria to consider: cost/time/energy/remaining useful life

• Uniform rate of progress must be considered first; but not necessarily adopted

• States must consult with contributing states. Where agreement cannot be reached, states must explain what actions were taken to resolve disagreements
“If the State determines that the amount of progress identified through the analysis is reasonable based upon the statutory factors, the State should identify this amount of progress as its reasonable progress goal for the first long-term strategy, unless it determines that additional progress beyond this amount is also reasonable.

If the State determines that additional progress is reasonable based on the statutory factors, the State should adopt that amount of progress as its goal for the first long-term strategy.

If the State determines, based on the statutory factors, that the identified uniform rate of progress needed to reach natural conditions is not reasonable, the State must provide in its plan submission the analysis and rationale supporting this determination. The State then must provide a demonstration as part of its SIP submission showing why a less ambitious goal is reasonable, based on the statutory factors.”
Long-term Strategy (Preamble language)

“Strategies for improving visibility should address all types of sources. Section 169A provides for State longterm strategies to address all types of sources and activities emitting pollutants that contribute to visibility impairment in Class I areas, including stationary, mobile, and area sources.” (emphasis added)
What is Reasonable?

- CAIR/Multi-P proposals for EGUs
- ICI Boiler RACT
- Cement and Lime Kiln RACT
- Municipal Waste Combustor RACT
- DG (Small ICE; on or off grid)
- Peaking Units
- Refinery RACT
- Clean Corridors (on road HDD and locomotives)
- Regional Fuels (on road)
- Reduced Sulfur Heating Oil (residential and commercial)
- Cutback asphalt & emulsified sealer
- AIM coatings
- Consumer Products
- Open Burning (trash, construction and demolition, etc.)
- Residential Wood Burning and Outdoor Wood Boilers
M-V Next Steps

• Developing a Reasonable Progress Goal “Resource Book” for each Class I state
• Resource Book will lay out information and recommendations for Class I states to set their progress goals
• Guidance from EPA is “on the way” and welcome