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Air Resource Management

Air Quality Measures

- Regulatory Standards
 - National and State Ambient Air Quality Standards
 - Prevention of Significant Deterioration Increments
 - Particular case of ozone
- Air Quality Related Values (AQRVs for Class I areas)
 - Visibility (light extinction)
 - Nitrogen and Sulfur Deposition
 - Lake Acidification
 - BLM has an “affirmative responsibility to protect the air quality and related values” (Section 165 (d)(2) of Clean Air Act)
- Hazardous Air Pollutants
 - Acceptable ambient concentration levels (AACLS)



National Ambient Air Quality Standards - “the NAAQS”

Title 1, Section 109

Attainment
Nonattainment
Maintenance
Unclassified

| National Ambient Air Quality Standards | | |
|---|------------------------------------|-------------------|
| Pollutant | Primary Standard | Averaging Times |
| Carbon Monoxide | 9 ppm (10 mg/m ³) | 8-hour |
| | 35 ppm (40 mg/m ³) | 1-hour |
| Lead | 1.5 µg/m ³ | Quarterly Average |
| Nitrogen Dioxide | 0.053 ppm (100 µg/m ³) | Annual |
| Particulate Matter (PM ₁₀) | 50 µg/m ³ | Annual |
| | 150 µg/m ³ | 24-hour |
| Particulate Matter (PM _{2.5}) | 15.0 µg/m ³ | Annual |
| | 35 µg/m ³ | 24-hour |
| Ozone | 0.075 ppm | 8-hour |
| Sulfur Oxides | 0.03 ppm | Annual |
| | 0.14 ppm | 24-hour |
| | 0.5 ppm (Secondary) | 3-hour |



PM_{2.5} Formation

Volatile Organic Compounds

- *industrial sources*
- *biogenic sources*
- *fuel sources*



Nitrogen/Sulfur Oxides & Ammonia

- *motor vehicles*
- *diesel fuel*
- *livestock*



Primary PM_{2.5}
directly emitted

Secondary PM_{2.5}-chemically formed

Cold, Stagnant Air

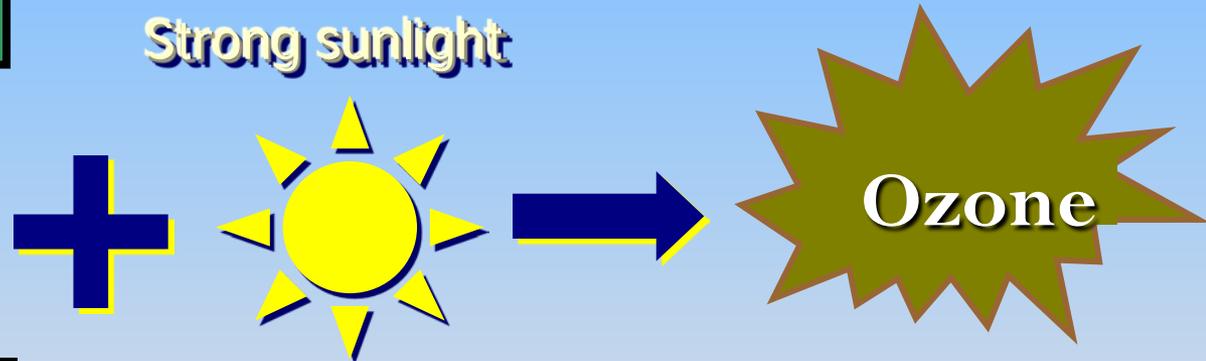
Ozone Formation

Volatile Organic Compounds

- *industrial sources*
- *biogenic sources*
- *fuel sources*

Nitrogen Oxides

- *transportation sources*
- *combustion sources*



Potential Utah Ozone Monitoring Network

- UDAQ
- CURRENT UINTAH NETWORK
- PARK SERVICE
- PROPOSED NEW SITES
- BLM POMS



Air Quality Challenges - Ozone

- EPA promulgated new NAAQS to 0.075 ppm (75 ppb), likely to lower even farther (60 – 70 ppb)
- Uintah monitors higher than existing standard
- “Winter Ozone” issues observed in other parts of the region
- It is unclear how to do an EA/FONSI in a non-attainment area
- It is unclear how to do a major project EIS in a non-attainment area
- It is unclear if BLM can or will issue a ROD with predicted design value exceedences
- It is clear that more appeals will be filed



Utah Air Resource Management Strategy

Purpose

Create a management structure which defines how activities BLM authorizes in Utah, particularly energy development, can be conducted while still ensuring air quality goals are met

Three components

- air monitoring
 - comprehensive modeling
 - mitigation



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Utah Air Resource Modeling Goals and Objectives

- Characterize existing development with improved model resolution and model validation
- Model reasonably foreseeable development
- Develop a modeled maximum emissions year scenario which meets identified air quality goals (NAAQS, AQRVs)
- Use the modeling demonstration in NEPA
- Update the emission inventory on a three year schedule, remodel based on the review and/or additional identified RFD – adaptive management concept



Management Strategies

- Be Prepared to Make Emission Mitigation Commitments
 - It is Better to Plan These for the Most Cost Effective and Largest Effects
 - In Jonah, EPA Threatened Unsatisfactory Rating if Engines Not Restricted to 1gr/hp-hr. BLM Agreed
- Ozone Issues May Require Controls of Existing Equipment
 - Formal Off-sets in Non-attainment Areas
 - Model Predicted Impact Reduction Where Analysis Shows Design Value Exceedence