

Little Colorado River RC&D

6th Annual Winter Watershed Conference

Arizona Regional Haze

**Trevor Baggiore
Arizona Department of Environmental Quality
January 31, 2013**

Update on Visibility Rules

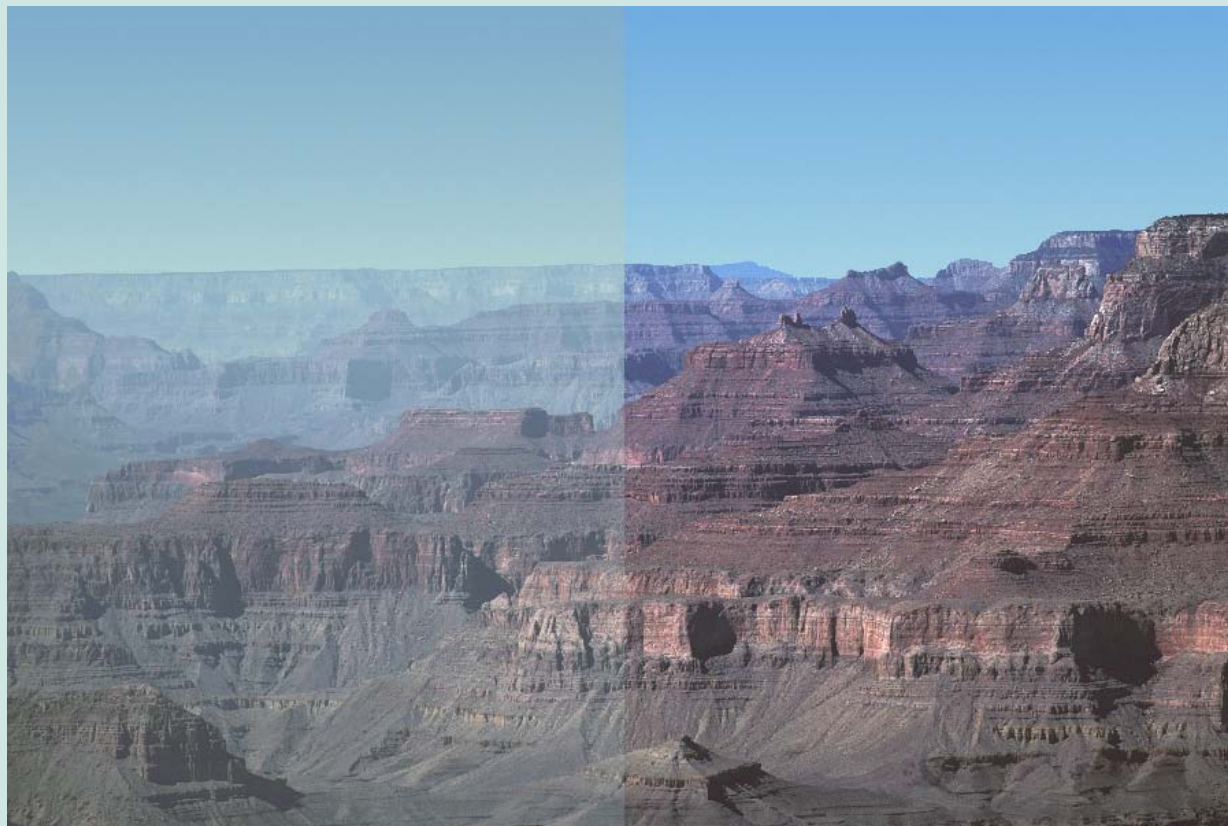
- **Overview on Regional Haze & BART**
- **Current Status**
 - Phase 1
 - Phase 2
- **Next Steps**

Visibility Impairment/Regional Haze

- **Visibility Impairment**
 - Air pollution transported over long distances.
 - Small particles that absorb and scatter light, affecting the clarity and color of what we see.
 - Sulfates, nitrates, organic carbon, elemental carbon and soil dust.
 - Both natural & anthropogenic sources.



Grand Canyon (worst & best)



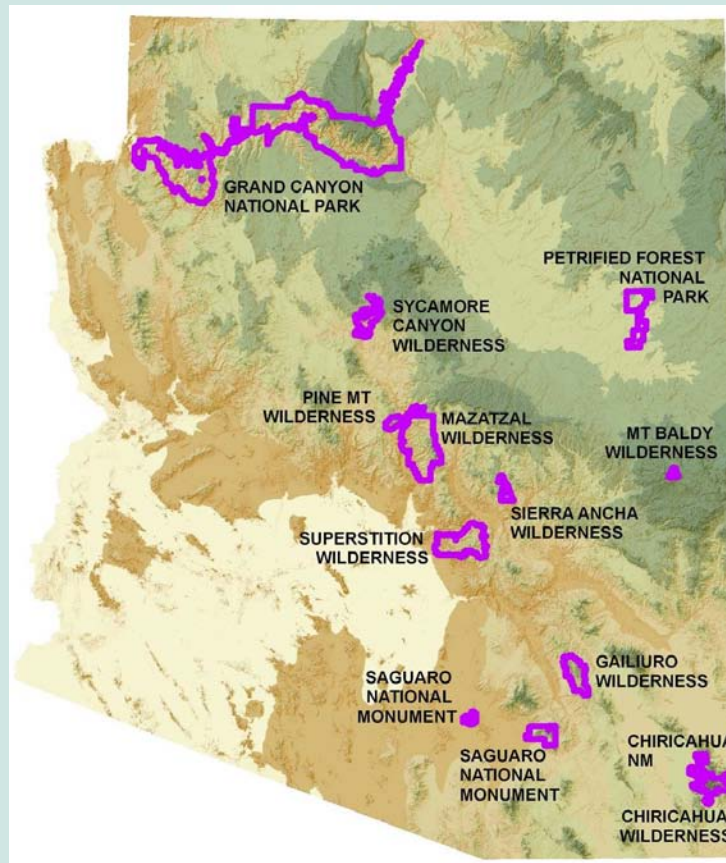
History

- **1990 - Clean Air Act added §169A & § 169B addressing transport (regional haze) and authorizing creation of regional planning organizations.**
- **Grand Canyon Visibility Transport Commission (GCVTC) was created to address impairment at the Canyon.**
- **GCVTC expanded its mission to include mandatory Federal Class I areas (parks and wilderness areas or C1As) on the Colorado Plateau.**

Western Class I Areas



Arizona Class I Areas



Regional Haze Timeline

- **12/31/2003 – “§309 SIP”; SO₂ trading**
- **12/30/2004 - Revision to §309 SIP; fire rules**
- **Partial disapproval signed by EPA on January 23, 2013**

Timeline Continued

- **1/15/2009 - EPA Finding of Failure to Submit Haze Plans (included Arizona)**
- **2/28/2011 – Arizona submitted “§308” plan**
- **8/29/2011 – Complaint filed for EPA not acting on Haze Plans by Environmental Groups**
- **11/9/2011 – Consent Decree: schedule for EPA review & action on Haze plans**

Consent Decree Schedule

<p>Regional Haze</p> <ul style="list-style-type: none"> Phase 1 - (3 EGU sources) 	<p>11/15/12 (completed)</p>	<p>consent decree deadline</p>
<ul style="list-style-type: none"> Phase 2 SIP action 	<p>NPRM: 12/7/12 (completed) FRM: 7/15/13</p>	<p>consent decree deadline</p>
<ul style="list-style-type: none"> Phase 3 FIP action 	<p>NPRM: 3/8/13 FRM: 10/15/13</p>	<p>consent decree deadline</p>

Timeline Continued

- **12/23/2011 – Arizona filed motion to intervene; accepted January 2012**
- **3/30/2012 – Consent Decree approved; deadlines for EPA action on Arizona SIP**
- **7/20/2012 – EPA proposed disapproval and FIP on EGUs (phase 1)**
- **12/5/2012 – EPA final rule & FIP on EGUs (phase 1)**
- **12/21/2012 – EPA proposed rule on remainder of plan (phase 2)**

Phase 1 Decision

- **Addresses Best Available Retrofit Technology (BART) to control emissions from eight units at three electric generating stations: Apache Generating Station, Cholla Power Plant and Coronado Generating Station.**
- **EPA approved State's determination that the three sources are subject to BART**
- **Approved the State's emissions limits for sulfur dioxide (SO₂) and particulate (PM₁₀) at all the units**
- **Disapproves Arizona's BART emissions limits for nitrogen oxides (NO_x) at the coal-fired units of the three plants.**
- **Promulgated new emissions limits for NO_x and compliance schedules for implementation of BART and maintenance, monitoring, recordkeeping and reporting for all units and all pollutants at the three sources.**

Best Available Retrofit Technology

- **BART applies at the emission unit level**
- **BART-eligibility set by three criteria:**
 - **One of 26 listed source categories (typically largest industrial sources of air pollution);**
 - **Began operation after August 7, 1962, and in existence before August 7, 1977; and**
 - **Potential emissions from all BART-eligible units is greater than 250 tons per year of any single visibility impairing pollutant.**

BART Analysis

- **BART-eligible sources use air dispersion modeling analysis to determine impacts in Class I Areas.**
 - **Inherent imprecision in the technical tools for visibility analysis.**
 - **EPA indicates that if the impact is:**
 - **> 0.5 dv, the source contributes to Regional Haze**
 - **> 1.0 dv, the source causes Regional Haze**

Arizona BART Determination

- **Arizona used 7 steps:**
 - Identify existing controls already in use
 - Identify all available retrofit control options
 - Eliminate technically infeasible control options
 - Evaluate control effectiveness for control options
 - Evaluate energy and non-air quality environmental impacts of each option (includes cost)
 - Evaluate visibility impacts (benefits)
 - Select BART

Arizona BART Sources

- **14 Arizona sources considered BART-eligible.**
- **6 Arizona sources went through BART determination process**
 - Catalyst Paper (Snowflake)
 - AEPCO Apache Generating Station (near Benson)
 - APS Cholla Power Plant (Joseph City)
 - ASARCO Smelter (Hayden)
 - Freeport McMoRan Smelter (Miami)
 - SRP Coronado Generating Station (St. Johns)

EPA's Disapproval on Az BART

- **BART emissions limits for NO_x at all three BART sources and units except for Coronado Unit 2 and Apache Unit 1.**
- **Compliance & equipment maintenance requirements for BART at all three sources.**
- **For each BART source, plan must include a requirement to install & operate control equipment as expeditiously as practicable; requirement to maintain control equipment; & procedures to ensure control equipment is properly operated and maintained, including requirements for monitoring, recordkeeping and reporting.**

Impact of BART Decision

Unit	Control Technology
Apache Generating Station Unit 1	Operate only pipeline natural gas
Apache Generating Station Unit 2	SCR with LNB & OFA
Apache Generating Station Unit 3	SCR with LNB & OFA
Cholla Power Plant Unit 2	SCR with LNB & OFA
Cholla Power Plant Unit 3	SCR with LNB & OFA
Cholla Power Plant Unit 4	SCR with LNB & OFA
Coronado Generating Station Unit 1	SCR with LNB & OFA
Coronado Generating Station Unit 2	SCR with LNB & OFA

Financial Impact

- **AEPCO - \$176 million**
- **APS Cholla - \$450 million**
- **SRP Coronado - \$110 million**

What are We Doing

- Appeal of consent decree (pending in 1st U.S. Circuit Court of Appeals)
- Appeal of Phase I action (9th U.S. Circuit Court of Appeals) – mailed January 30, 2013
- Request for stay of Phase I requirements.

Arizona Comments

- **EPA didn't allow ADEQ enough time to revise SIP.**
- **EPA has no authority to adopt FIP.**
- **The CAA doesn't give EPA authority to bifurcate the plan and take separate action (phase 1 & phase 2).**
- **EPA's decision accepts only the approach to determining BART that is in line with their end goal.**

Arizona Comments

- **EPA's ignored rule requirement that baseline is 2000-2004; EPA's BART analysis used baseline from 2008-2011.**
- **EPA arbitrarily refuses to consider real-world costs for determining BART.**
- **EPA appears to incorrectly interpret State's evaluation of visibility benefit.**

EPA Decision on Phase 2 - Disapprovals

- **Plan does not include the most recently available emission inventory.**
- **Arizona's determination that Tucson Electric Power Sundt Generating Station Unit 4 is not BART eligible.**
- **Arizona's determination that Nelson Lime Plant is exempt from BART (EPA is seeking comment on whether this determination was reasonable and should be approved.)**
- **Arizona's conclusion that a BART determination is not required for PM₁₀ at the Hayden smelter and for NO_x at the Miami smelter.**
- **The compliance schedules and requirements for equipment maintenance and operation related to BART controls at the Hayden smelter and the Miami smelter because these were not included in the State's submittal.**

EPA Decision on Phase 2 - Disapprovals

- **Arizona's Reasonable Progress Goals :**
 - The state has not demonstrated that these goals constitute reasonable progress by 2018 toward the goal of natural conditions by 2064.
- **The plan does not include all measures needed to achieve that state's apportionment of emission reduction obligations with respect to out-of-state class I areas.**
- **Arizona did not adequately consider emissions limitations and schedules of compliance to achieve the RPGs or the enforceability of emissions limits and control measures.**

What are We Doing

- **Extension of public comment period – through March 6, 2013.**
- **Potential submittal of a revised plan.**

NGS Decision

- **Impact**
 - Requires SCR as NO_x control
 - Allows for 10 year period for installation
 - Expected cost between \$600 million and \$1.1 billion
- **Currently going through public comment**

Potash Mining

- **No air quality application received**
- **Conversations with American West**
 - Application in mid-February
- **Aware of other potential facilities**
- **Potash Mining Info Sheet**
 - http://www.azdeq.gov/function/permits/download/potash_mining_permits_requirements.pdf

Questions

- **Trevor Baggiore**
 - (602) 771-2321
 - tb4@azdeq.gov