

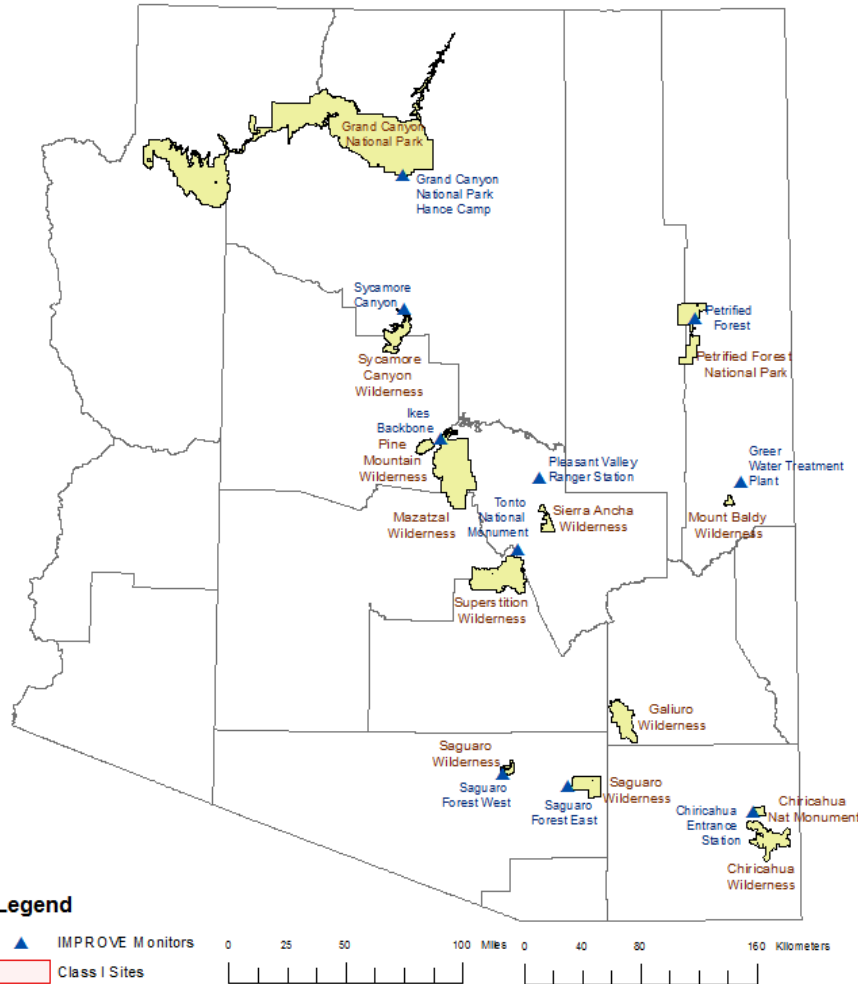
Arizona Regional Haze SIP Revision Second Implementation Period

Presented by Elias Toon

Arizona Department of Environmental Quality
Air Quality Improvement Value Stream



Regional Haze Class I Areas and IMPROVE Monitors



- 10 IMPROVE monitors are operated in Arizona that provide data for the 12 Federal Class I areas

Area Name	Acreage
Chiricahua National Monument Wilderness	9,440
Chiricahua Wilderness Area	18,000
Galiuro Wilderness Area	52,717
Grand Canyon NP	1,176,913
Mazatzal Wilderness Area	205,137
Mount Baldy Wilderness Area	6,975
Petrified Forest NP	93,493
Pine Mountain Wilderness Area	20,061
Saguaro Wilderness Area	71,400
Sierra Ancha Wilderness Area	20,850
Superstition Wilderness Area	124,117
Sycamore Canyon Wilderness Area	47,757

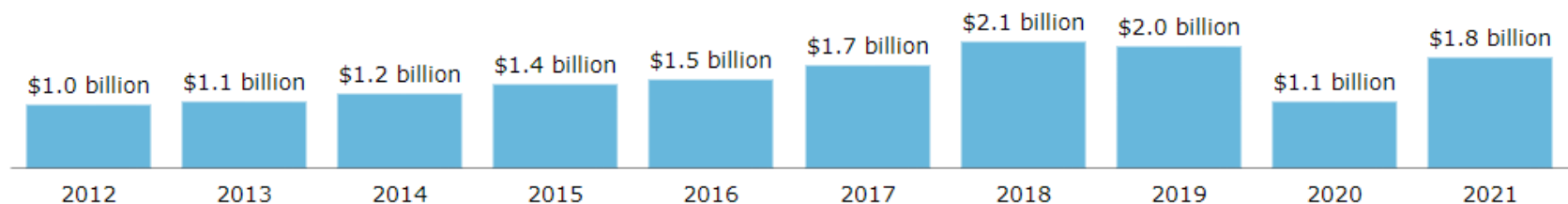
Source: US EPA Region 9

- **Grand Canyon National Park**
 - 4,532,677 visitors
 - \$710,256,000 total visitor spending
 - 9,390 local jobs supported by tourism
 - Cumulative benefit of \$944,693,000



Photo Credit: NPS

AZ NPS Managed Sites Total Economic Output Contributed to the Arizona Economy



Source: NPS Visitor Spending Effects 2021

Point Sources

ASARCO – Mission Complex

ASARCO – Ray Complex

CalPortland – Rillito Cement Plant

Drake Cement

EPNG – Williams Compressor Station

EPNG – Willcox Compressor Station

Freeport-McMoRan – Morenci Mine

Freeport McMoRan – Sierrita Mine

Phoenix Cement – Clarkdale Plant

TEP– Springerville Generating Station

TEP– Sundt Generating Station

Nonpoint Source Sectors

Non-Residential Construction Dust

Mining & Quarrying

Paved Road Dust

Unpaved Road Dust

Reasonable Progress Determinations

Facility/Sector	Unit & Pollutant	Control/Emission Limit	Enforceable Vehicle
Tucson Electric Power – Springerville Generating Station	Units 1 & 2 for SO ₂	<p>16.1 tons/day on a 30-day rolling avg for Units 1 & 2 combined</p> <p>3729 tpy on a 12 month rolling avg for Units 1 & 2 combined</p>	ADEQ Significant Permit Revision No. 91093 to Operating Permit No. 65614 Cover Page and Attachment “E” Regional Haze Provisions: Tucson Electric Power Plant – Springerville Generating Station.
El Paso Natural Gas - Williams Compressor Station	RECIP B1, B2, B5 for NO _x	<p>RECIP B2 & B5 – 1.5 g/bhp-hr</p> <p>RECIP B1 – 3.0 g/bhp-hr</p>	Arizona Department of Environmental Quality Significant Permit Revision No. 93062 to Operating Permit No. 77575 Cover Page and Attachment “D”: Regional Haze Provisions.

Reasonable Progress Determinations (cont.)

Facility/Sector	Unit & Pollutant	Control/Emission Limit	Enforceable Vehicle
ICI Construction Rule	PM10	<ul style="list-style-type: none"> • Pave unpaved parking and staging areas • Apply acrylic polymer to unpaved parking and staging areas • Apply gravel to unpaved parking and staging areas • Limit vehicle speed at work site to 15 mph with signage 	<p>Final SIP Requested Conditional Approval</p> <p>Rulemaking currently underway</p> <p>Regional Haze Rulemaking: https://azdeq.gov/node/8414</p>
Paved Roads Rule	PM10	<ul style="list-style-type: none"> • Pave access points where unpaved traffic surfaces adjoin paved roads • Provide for traffic rerouting or rapid cleanup of temporary (and not readily preventable) sources of dust on paved roads (trackout, spills, water erosion, runoff, and skid control sand) 	<p>Final SIP Requested Conditional Approval</p> <p>Rulemaking currently underway</p> <p>Regional Haze Rulemaking: https://azdeq.gov/node/8414</p>

Tucson Electric Power

Irvington Generating Station

Unit 3

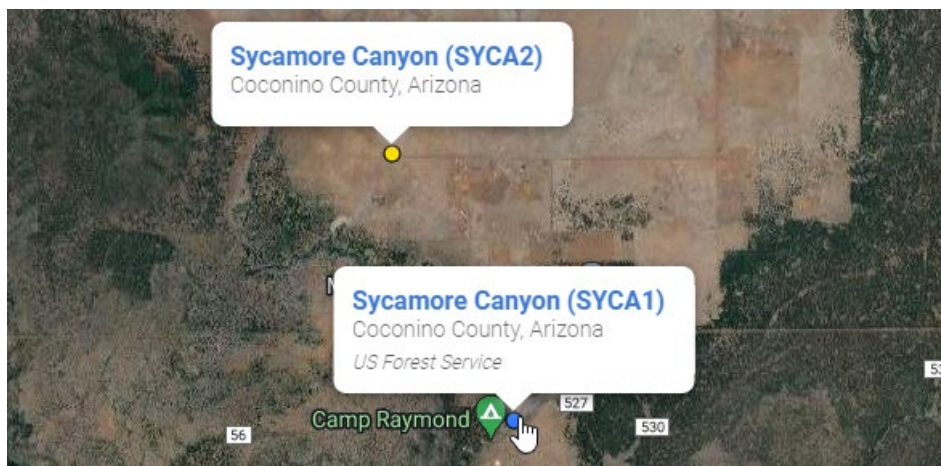
1. 335 tons per 12-month rolling total;
2. 753 tons per 36-month rolling total; and
3. 1,285 cumulative tons for the remaining life of the unit. The unit must shut down permanently before the cumulative limit is exceeded.

Table: Cost Effectiveness for SCR + LNB at TEP IGS U3

Remaining Useful Life (years)	Lifetime Emission cap (tons)	Annual Emissions with cap (tpy)	Emission reductions (tpy)	Annualized Capital Cost	Annual O&M cost	Total annual cost	Average Cost effectiveness (\$/ton)
20	1285	64.25	58.05	\$1,427,020	\$270,338	\$1,697,358	\$29,253
15	1285	85.67	77.40	\$1,719,598	\$275,737	\$1,995,335	\$25,791
10	1285	128.50	116.09	\$2,322,485	\$286,533	\$2,609,018	\$22,482
6	1285	214.17	193.49	\$3,548,152	\$308,125	\$3,856,278	\$19,938

Statewide Anthro EI Scenario Totals and LTS Anthropogenic Emission Reductions (tpy)						
Sector	2014v2	RepBase2	2028OTBa2	2028LTS	2028LTS - RepBase	2028LTS - RepBase (% Change)
NH ₃ Anthropogenic Total	33,467	33,164	32,713	32,713	-451	-1%
NO _x Anthropogenic Total	235,258	220,451	94,261	93,762	-126,689	-57%
SO ₂ Anthropogenic Total	49,270	43,306	15,912	13,790	-29,515	-68%
PM ₂₅ Anthropogenic Total	52,672	57,046	53,720	53,720	-3,325	-6%
PM ₁₀ Anthropogenic Total	215,391	222,029	217,140	217,140	-4,890	-2%
VOC Anthropogenic Total	177,503	194,047	155,399	155,399	-38,648	-20%

ADEQ Final LTS meets or exceeds URP at all but one AZ Federal Class I area.



Project Planning by the Numbers

- 4 years of planning (Oct 2018-August 2022)
- 7 Public Stakeholder Meetings
- Coordination with 3 Federal Land Manager Agencies (USFS, NPS, USFWS)
- Formal consultation with 5 surrounding states
- 242 public comments received by ADEQ on the proposed SIP revision
- Final plan provides for meeting EPA benchmark at 11 out of 12 Arizona Class I Areas
- Turned the SIP revision in on the deadline to avoid a Finding of Failure to Submit by EPA – Prevented a 2 year FIP Clock from being triggered
- Completeness Finding issued by EPA in 1 day.

Thank you

Questions?

Please contact:

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ADEQ RH Planning Webpage - <http://www.azdeq.gov/regional-haze-sip-planning>

