

# Regional Haze SIP Development Update

Presented by Cooper Garbe, DEQ, Air Quality Rules and Planning

Air Quality Advisory Council Meeting

June 16, 2021

# Review and background

- At January 2020 AQAC we presented:
  - Positive progress toward improving visibility at the WMWA
  - SO<sub>2</sub> reductions means NO<sub>x</sub> contributes a greater percentage to impairment
  - Source specific analysis and evaluations were to begin
- At June 2020 AQAC we presented:
  - Visibility data and impacting emissions
  - Selection of sources for four-factor analyses
- Results of analysis → long-term strategy → reasonable progress goal
  - Compare to uniform rate of progress (URP)
  - State Implementation Plan (SIP) draft in review

# 4-factor analysis

- Regulatory requirement to consider:
  - The cost of compliance
  - The time necessary for compliance
  - The energy and non-air quality environmental impacts of compliance
  - The remaining useful life of any potentially affected source
- What sources will DEQ consider:
  - Methodology developed using Ramboll study commissioned by CenSARA

# Oklahoma sources for 4-factor analysis

## **SO<sub>2</sub>**

- Kremlin
- GRDA
- Hugo PP
- Ada Cement Plant
- Carbon Black - Ponca

## **NO<sub>x</sub>**

- Binger Gas Plant
- Chitwood Gas Plant
- Maysville Gas Plant
- Mustang PP
- Horseshoe Lake PP
- Lindsay Booster Station
- Cashion Station

# SO<sub>2</sub> Four-factor results

Facility	Units	Result (\$/ton)
Oxbow Kremlin Calcining	Kilns 1, 2 & 3	\$6,574 - \$42,258
Grand River Dam Authority	Unit 2	\$21,187 - \$176,851
Hugo Generating Plant	Unit 1	\$8,203 - \$41,003
Holcim Ada Cement Plant	Kiln	Removed and replaced <sup>1</sup>
Continental Carbon Ponca City	Thermal oxidizer units (3)	Removed and replaced <sup>2</sup>

- 1) SO<sub>2</sub> reductions estimated to be 2,000 tons per year
- 2) SO<sub>2</sub> reductions estimated to be 15,800 tons per year

# NOx Four-factor results

Facility	Units	Result (\$/ton)
Mustang's Binger Gas Plant	CM 2322, 2323	NSCR
DCP's Chitwood Gas Plant	C-1 – C-4; C-6 – C-9	\$3,250 - \$20,186
ONEOK's Maysville Gas Plant	C-1 – C-14	Removed or removing <sup>3</sup>
ONEOK's Lindsay Booster Station	C-13 – C-16; C-19 – C-22	Removed
OG&E's Mustang Power Plant	Units 3 & 4	Retired
OG&E's Horseshoe Lake Power Plant	Units 6 – 10	\$14,179 - \$129,391
Panhandle Eastern Pipeline's Cashion Compressor Station	U-338, 339; U-2301, 2302	No feasible control option; test data shows lower emissions

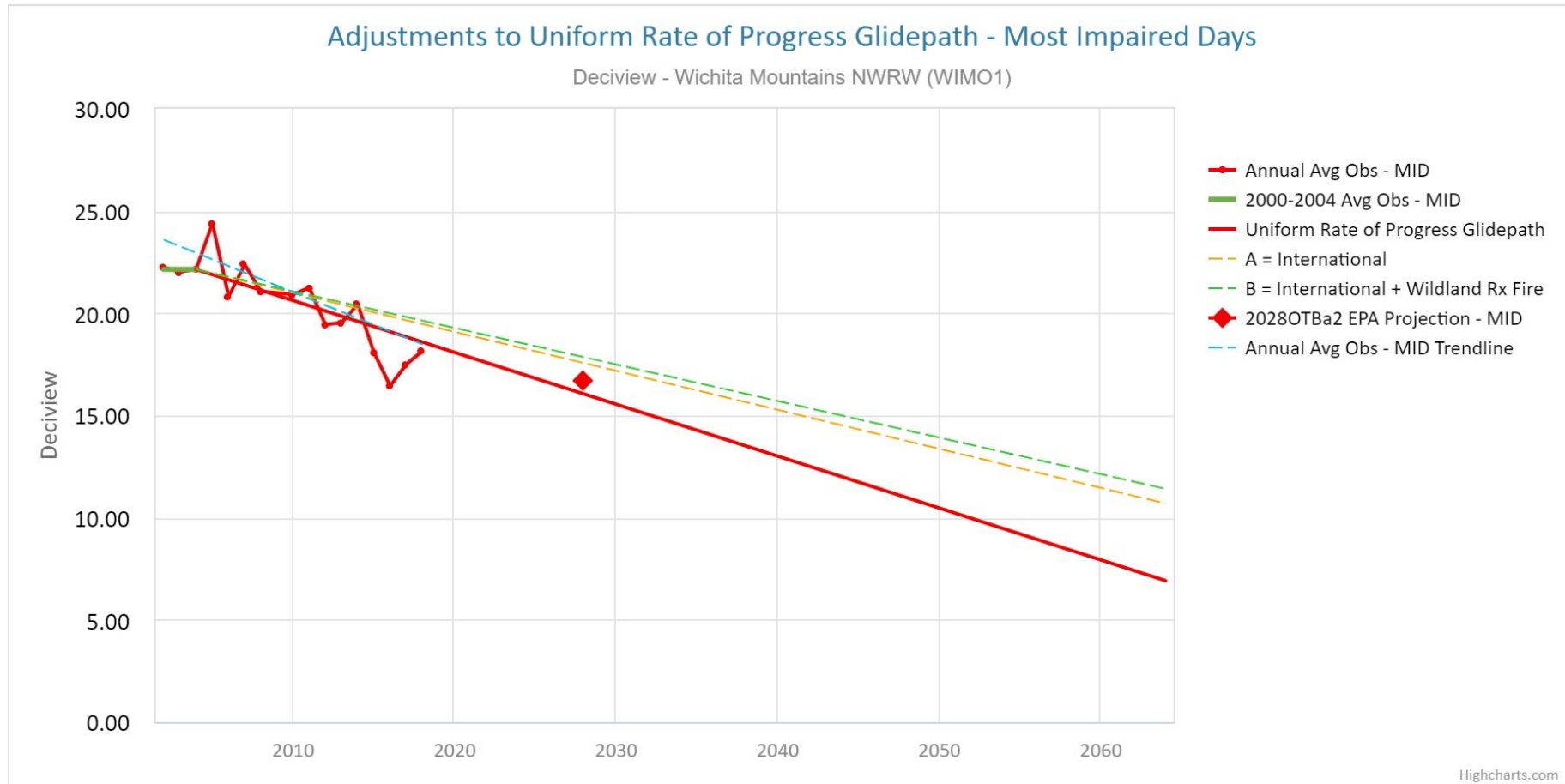
3) Agreed to remove remaining units subject to analysis in lieu of performing four-factor analysis

# Visibility progress

<b>Metric</b>	<b>Clearest 20% days (dv)</b>	<b>Most impaired 20% days (dv)</b>
Baseline	9.92	22.18
2015-2019	8.65	17.58
2028 Reasonable Progress Goal	8.14	16.93
Natural Conditions	4.20	10.19*

\*Adjusted for wildland fire and international contribution. EPA's modeling assessment produced a range of natural condition for the MIDs: 8.33 dv minimum, 10.19 dv default, and 11.27 dv maximum. DEQ has selected the default adjustment for characterizing MID natural conditions at the WMWA.

# URP Glidepath Adjustment



Courtesy: Western Regional Air Partnership



# Conclusion

- Long-term strategy reliant on existing programs will meet a reasonable progress goal better than the URP.
- SIP draft will be submitted to Federal Land Manager's (FLM) for review, starting a 60-day clock.
- Public review occurs following FLM comments.
- Planning Period 3 SIP is due July 31, 2028.