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# MOBILE GASEOUS STATIONS

Wyoming Department of Environmental Quality – Air Quality Division  
Presentation to Laramie Environmental Advisory Committee  
February 4, 2020



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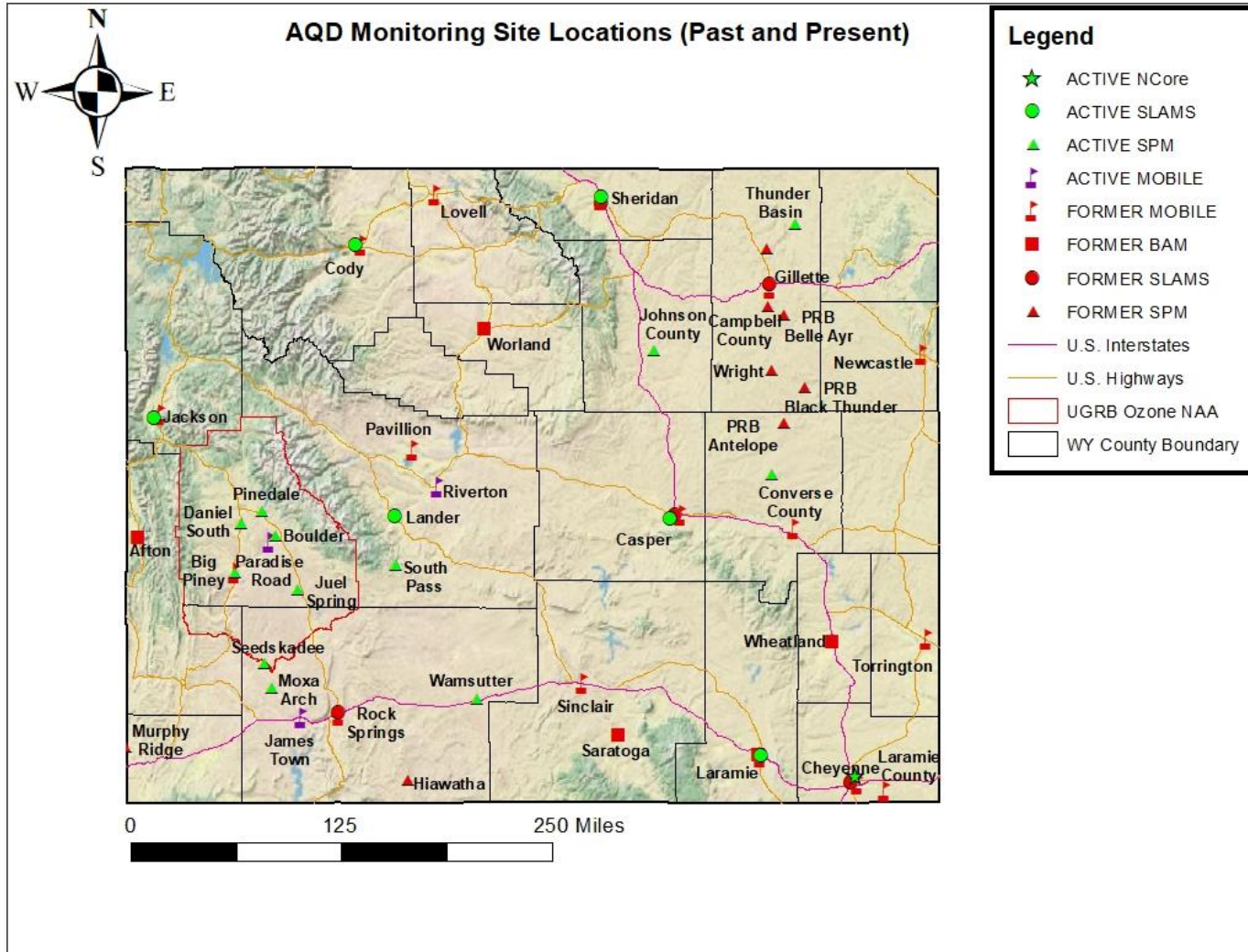
# Monitoring Section

- ◆ Fulfills EPA and State monitoring requirements to operate an efficient and effective ambient air monitoring network
  - State and Local Air Monitoring Systems sites (11)
  - Special Purpose Monitor sites (19)
  - Mobile Monitoring (4 stations)
  - Industrial monitoring sites (~90)
  - Federal monitoring sites (~25)
- ◆ Oversight of in-stack monitoring at facilities to fulfill EPA and State requirements

# Wyoming Monitoring Network



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# Mobile Station Overview

- ◆ The State of Wyoming has three mobile gaseous stations which operate at chosen locations for approximately one year.
- ◆ Mobile Stations have been in operation since 2010.
- ◆ Used to monitor various air quality concerns
  - areas of heavy industrial activity
  - characterize ambient air throughout the state.

# What the Mobile Measures

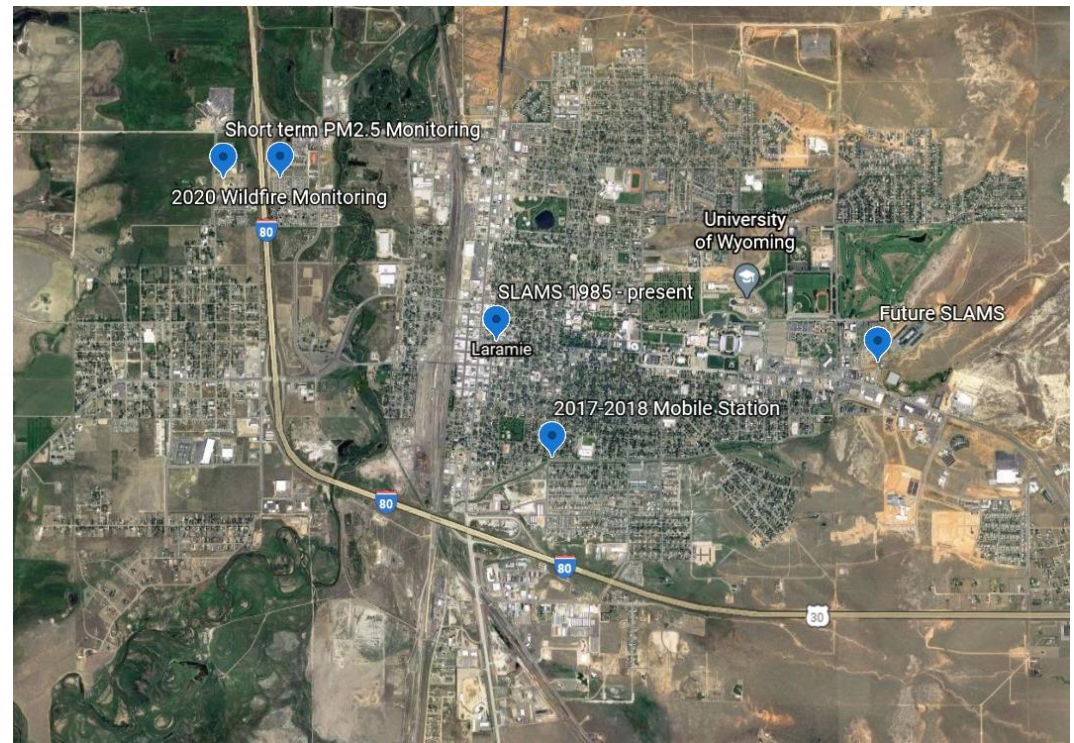


- ◆ Ozone (O<sub>3</sub>)
- ◆ NO<sub>2</sub>
- ◆ SO<sub>2</sub>
- ◆ Hydrocarbons
- ◆ Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>)
- ◆ Meteorological Data: Ambient temp, relative humidity, wind speed, wind direction, solar radiation, barometric pressure, precip.
- ◆ Digital camera
- ◆ All data is available on AQD's website: [wyvisnet.com](http://wyvisnet.com)



# History of Laramie Monitoring

- ◆ SLAMS site, converting to continuous monitoring.
- ◆ 2017-2018 Mobile Station
- ◆ Short term PM<sub>2.5</sub> monitoring after 2018 EAC presentation.
- ◆ 2020 Wildfire Monitoring



# 2020 Wildfire Exceedances

- ◆ AQD had a mobile BAM in Laramie for the 2020 wildfire season.
- ◆ There were 15 PM<sub>2.5</sub> and 2 PM<sub>10</sub> NAAQS Exceedances.

Parameter	Date	Highest 24-Hour Average
<b>PM<sub>2.5</sub> NAAQS = 35 µ/m<sup>3</sup> over 24 hour period</b>		
PM <sub>2.5</sub>	10/7/2020	127 µ/m <sup>3</sup>
	10/6/2020	118 µ/m <sup>3</sup>
	10/2/2020	99 µ/m <sup>3</sup>
	10/5/2020	99 µ/m <sup>3</sup>
	10/3/2020	99 µ/m <sup>3</sup>
	10/4/2020	87 µ/m <sup>3</sup>
	10/9/2020	84 µ/m <sup>3</sup>
	10/8/2020	83 µ/m <sup>3</sup>
	9/26/2020	79 µ/m <sup>3</sup>
	9/30/2020	60 µ/m <sup>3</sup>
	9/25/2020	53 µ/m <sup>3</sup>
	10/1/2020	52 µ/m <sup>3</sup>
	10/10/2020	41 µ/m <sup>3</sup>
	9/17/2020	38 µ/m <sup>3</sup>
	9/27/2020	37 µ/m <sup>3</sup>
<b>PM<sub>10</sub> NAAQS = 150 µ/m<sup>3</sup> over 24-hour period</b>		
PM <sub>10</sub>	10/6/2020	172 µ/m <sup>3</sup>
	10/7/2020	168 µ/m <sup>3</sup>

# Objectives of Monitoring in Laramie

- ◆ EAC requested monitoring in West Laramie in May, 2019.
  - Asked for 12-18 month deployment.
  - Focus on air quality in winter months, with closures of I-80.
  - Comment submitted in response to citizen concerns.
- ◆ 2020 Network Assessment.
- ◆ Objective is to monitor air quality in the community of Laramie due to the unique issue of temporary shutdowns on I-80 during the winter season.





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# Next Steps

- ◆ Request EAC's help finding a location for the mobile.
  
- ◆ Siting Requirements:
  - Duration – 2 winter seasons
  - Site location will require a 230 volt 50 Amp power supply.



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# Questions & Contacts

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