

**Rocky Mountain EHS Quarterly Meeting, January 17, 2019**

**Uintah Basin Air Permitting:**

**New State and EPA Processes for Oil and Gas Operations**

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SLR International

global **environmental** and **advisory** solutions



# Overview

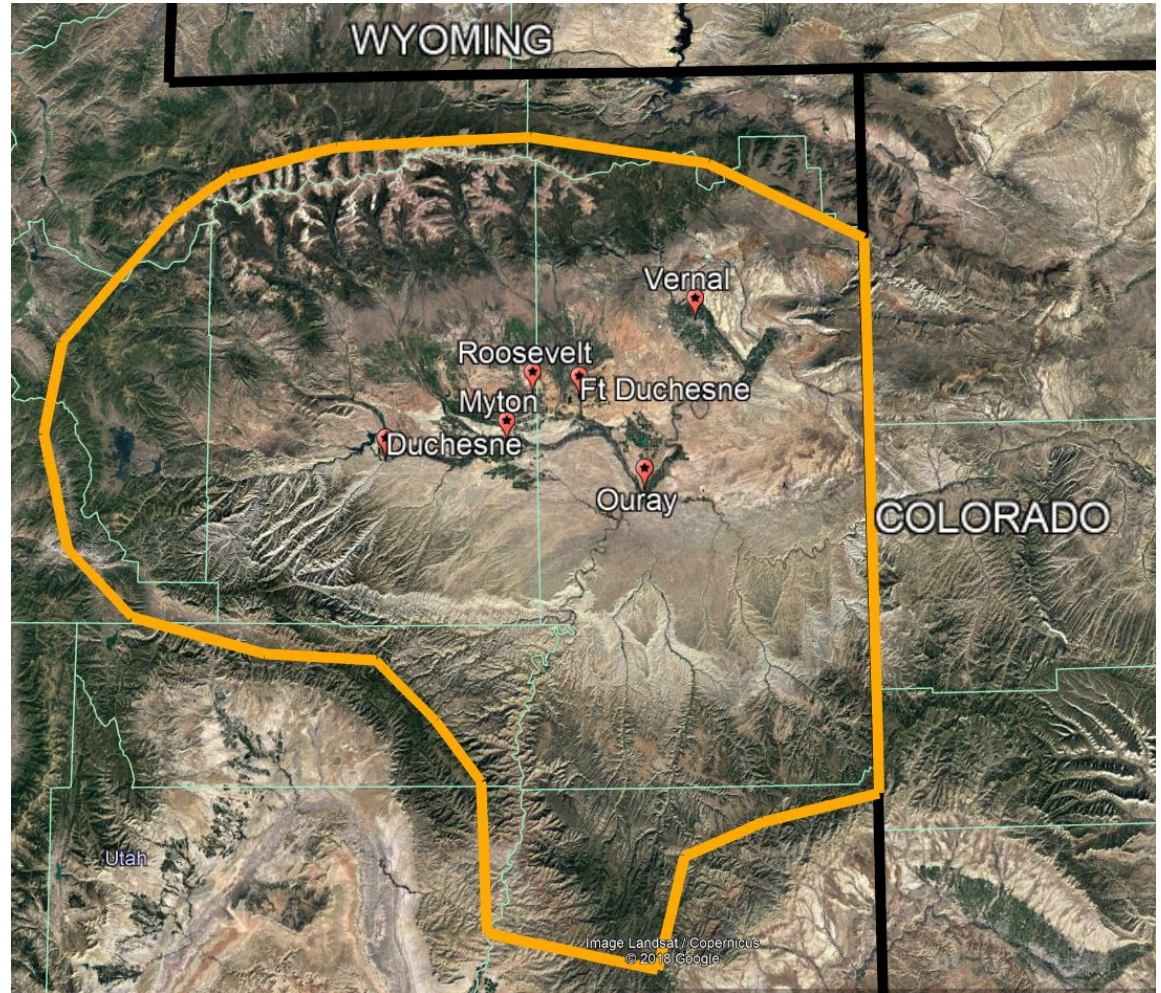
- **Jurisdictions**
- **Air Quality Status**
- **State of Utah Permitting**
- **EPA Permitting**

# Uintah Basin Experience

- **While with Newfield Exploration**
  - DAQ-Industry Working Groups
  - Tribal-Industry Planning
  - Tribal-EPA-Utah DAQ-Industry Working Groups
  - EPA Planning
  - Western Energy Alliance Air Quality Subcommittee
  - American Petroleum Institute Federal Permitting Subcommittee
  - Utah State Permits
  - EPA Minor Source Registrations
- **Back to Consulting**
  - Western Energy Alliance Air Quality Subcommittee
  - Uintah Basin Ozone Working Group
  - Air Quality Permitting
  - Air Quality Planning

# Uintah Basin

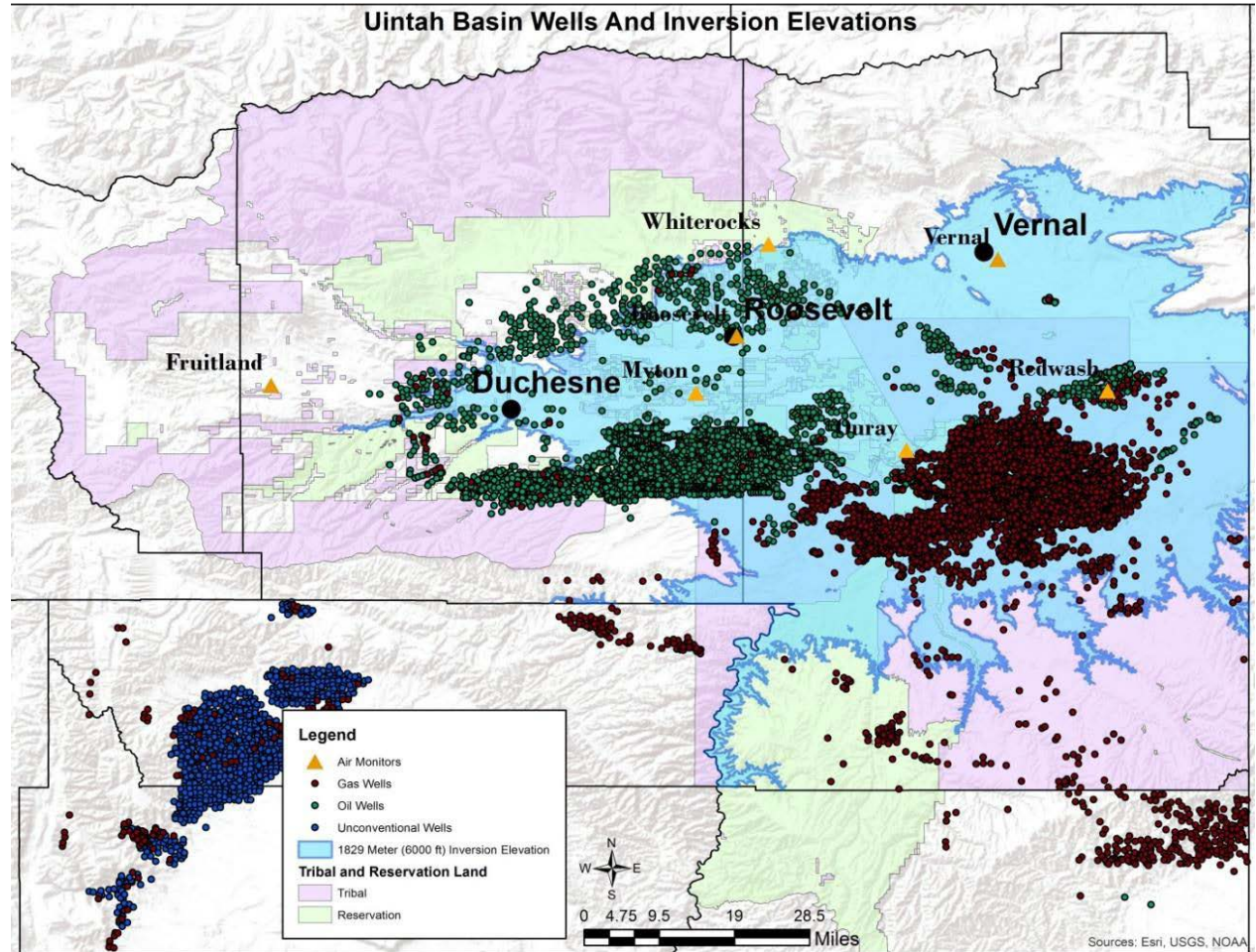
Approximate  
outline of the  
Uintah Basin



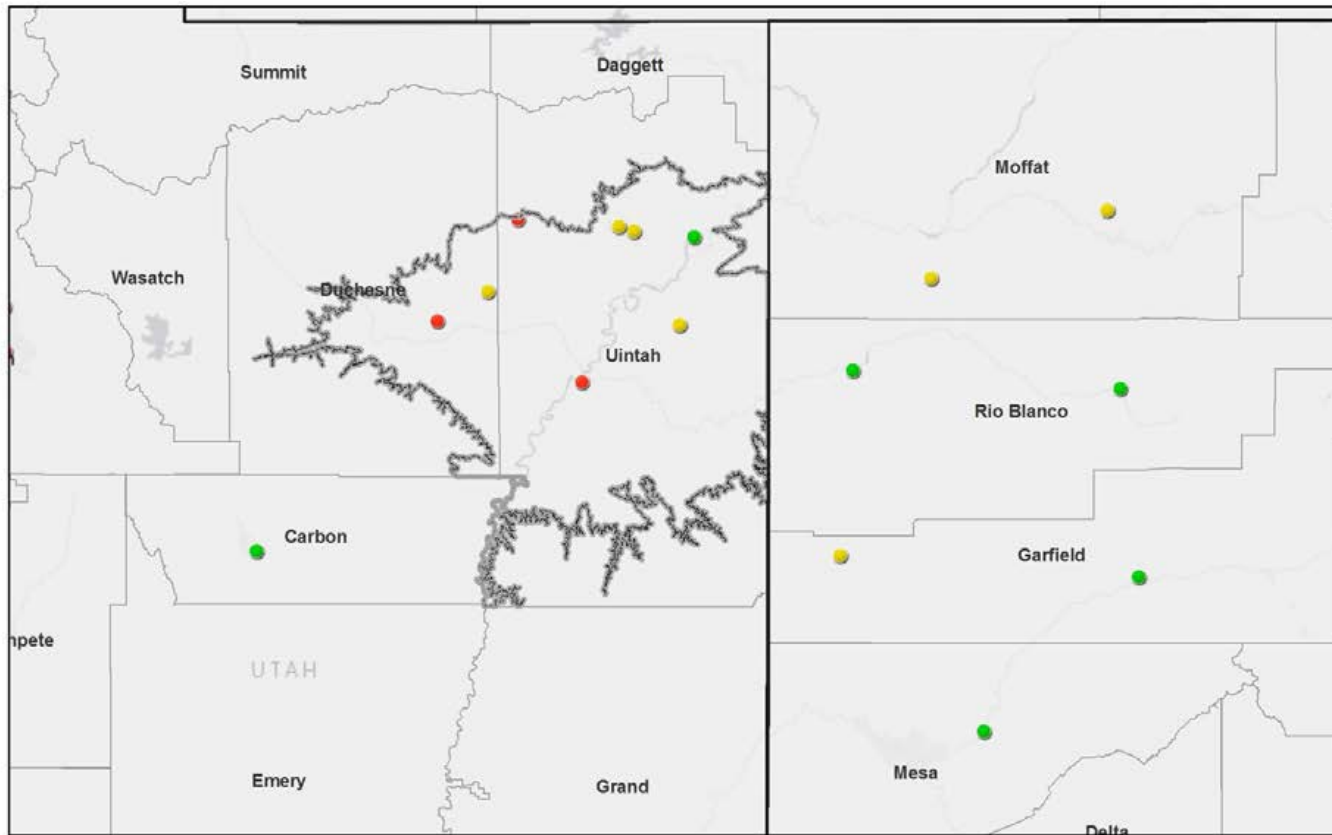


# Uintah Basin Oil and Gas

- Western Basin
  - Mainly oil
- Eastern Basin
  - Mainly gas



# Uintah Basin Ozone Monitoring

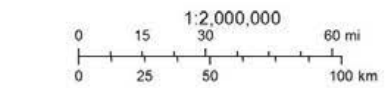


4/13/2018 7:17:27 AM

- State
- Counties
- 2015 Uintah Basin NAA

**Ozone 2016 Site Level Design Values**

- No Valid Value
- 0 - 0.070 (ppm)
- 0.071 and greater (ppm)

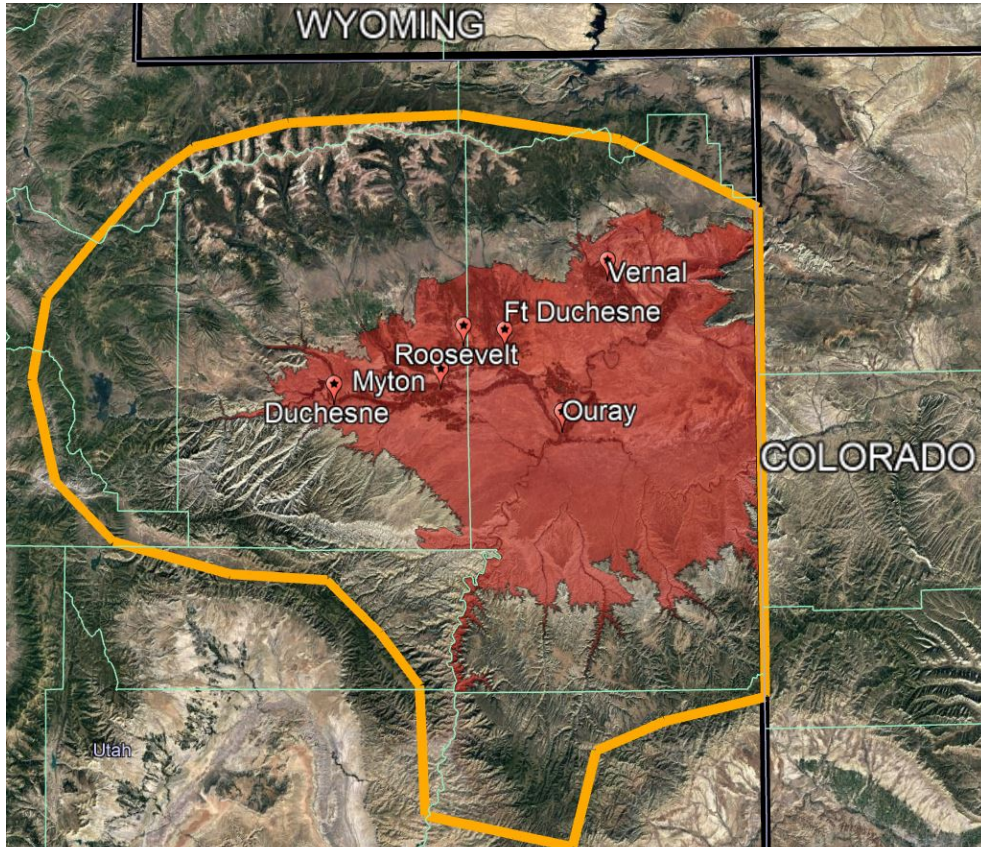


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Web AppBuilder for ArcGIS  
 AR, OAQPS, AQAD, AQAG; Data: US EPA National Emissions Inventory (NEI) | OAR/OAQPS/AQAD/AQAG | Map Service: USEPA Office of Environmental Information (OEI) Data: USEPA Office of Environmental Information (OEI), US Census Bureau | Source: U.S. Census Bureau |





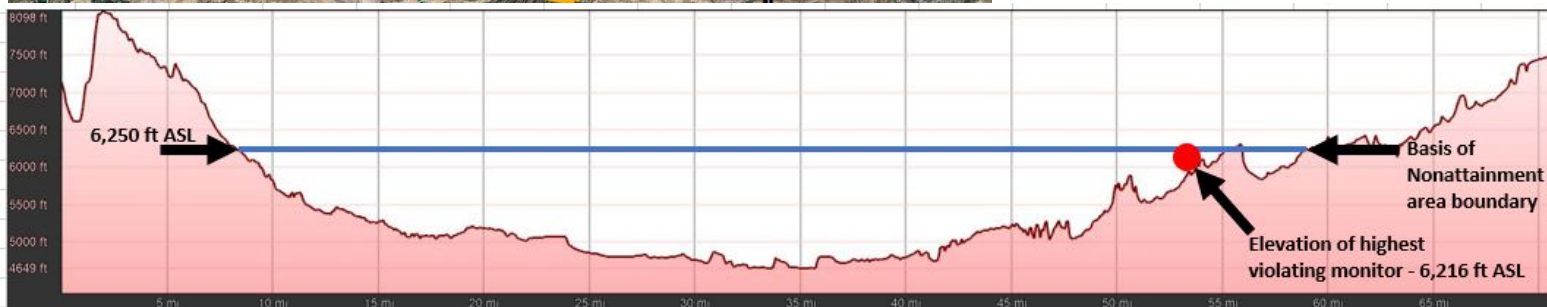
# Uintah Basin Ozone Nonattainment Area



Nonattainment for  
2015 ozone standard  
effective August 3, 2018

Attainment\Unclassified  
for 2008 ozone standard

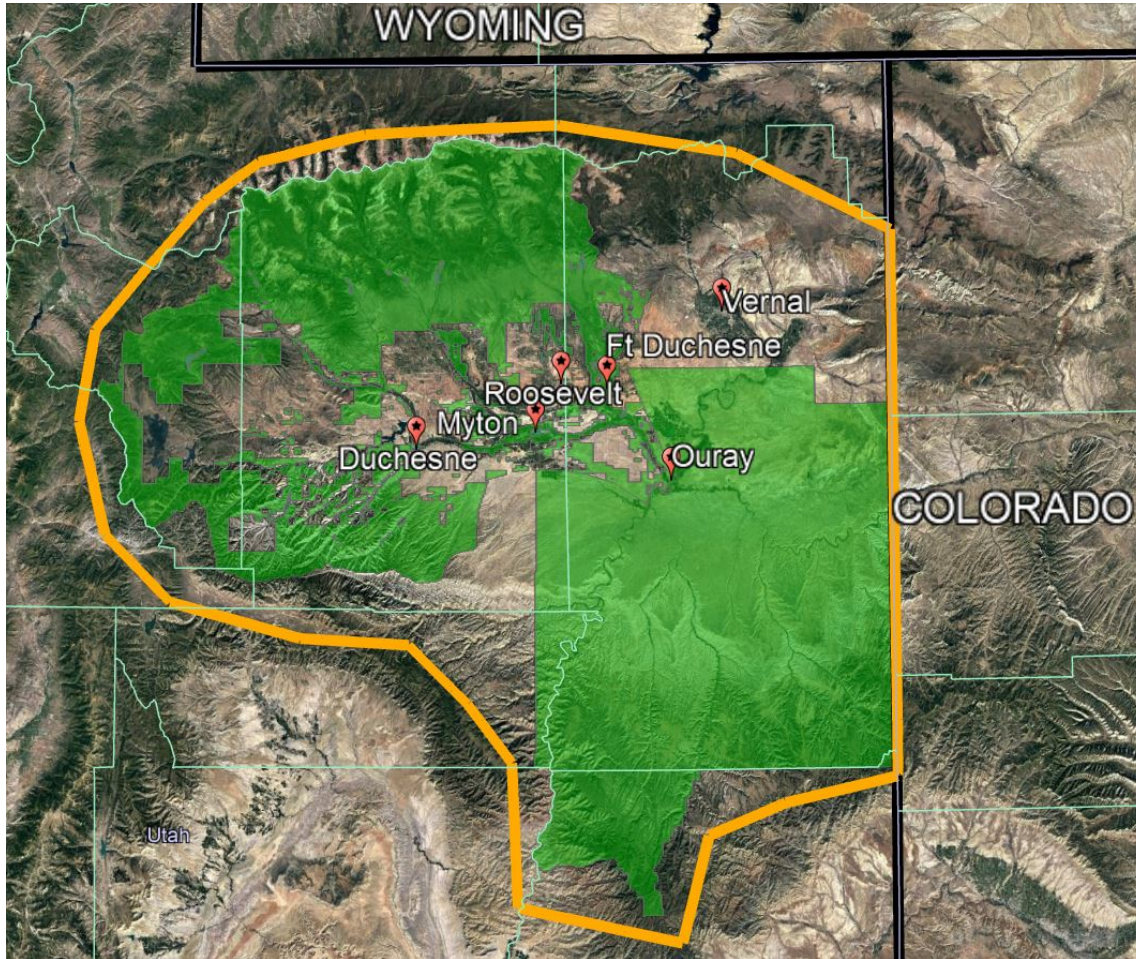
-  Nonattainment Area (< 6,250 ASL)
-  Approximate outline of the Uintah Basin





# Uintah Basin Jurisdiction

Divided between EPA and State of Utah (State) jurisdiction



 EPA jurisdiction

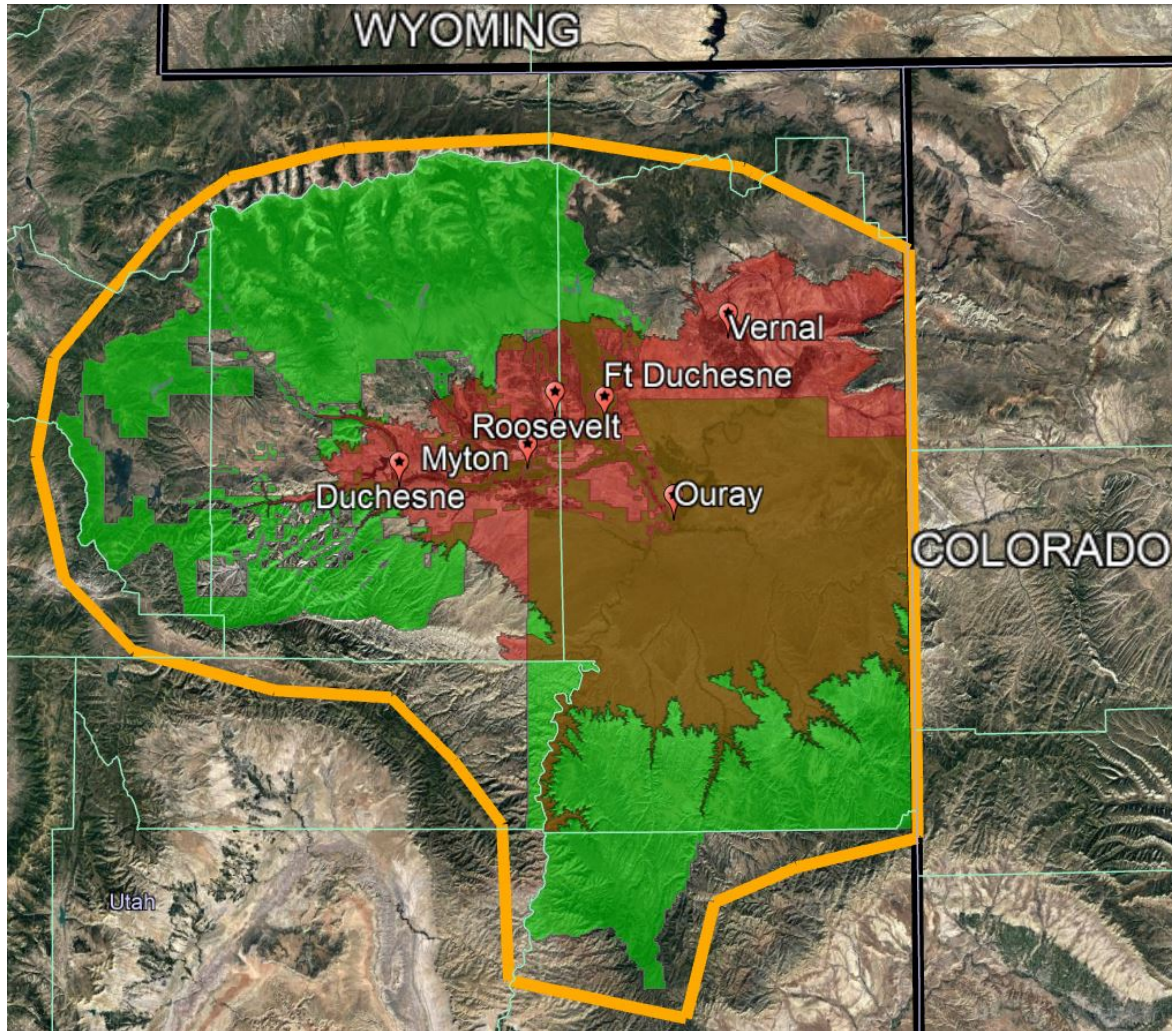
Unshaded areas are State of Utah jurisdiction

Conflict on minor differences on EPA\State jurisdiction boundary.

 Approximate outline of the Uintah Basin


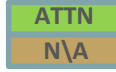




# Uintah Basin Ozone Nonattainment Area



Nonattainment for  
2015 ozone standard  
effective August 3, 2018

Complex mixture of  
jurisdiction and  
nonattainment

-  Nonattainment Area
-  EPA jurisdiction
-  State jurisdiction
-  Approximate outline of the Uintah Basin

# Four Types of Permitting Regions

- **State:**
  - **Attainment areas**
  - **Nonattainment areas**
- **EPA:**
  - **Attainment areas**
  - **Nonattainment areas**

# Air Quality Permitting Categories

- **Ozone Nonattainment only** (not other compounds)
  - Uintah Basin = Marginal (lowest) category of ozone nonattainment
  - Volatile organic compounds (VOCs) trigger:  $\geq 100$  tpy VOCs is a major source
- **Major Sources**
  - Nonattainment New Source Review (NNSR) (ozone nonattainment areas)
    - $\geq 100$  tpy VOC or  $\text{NO}_x$  emissions
    - $\geq 250$  tpy other criteria emissions (CO,  $\text{SO}_2$ , PM, Pb)
  - Prevention of Significant Deterioration (PSD) (attainment areas)
    - $\geq 250$  tpy criteria emissions
- **Minor Sources**
  - Applies to attainment or nonattainment areas
  - Not subject to NNSR or PSD
  - Synthetic Minor – with permit restrictions (i.e. major without restrictions)
  - True minor – without or with restrictions



# Major Source Permitting

- Major Sources

- PSD (attainment areas) includes:

- Best Available Control Technology (BACT)

- Engineering (applicability\precedent)

- Economics

- Environmental

- Air Quality Impact Analyses (AQIA)

- Computer modeling (ozone???)

- National Ambient Air Quality Standards (NAAQS)

- PSD increments (no ozone increment)

- NNSR (nonattainment areas) includes:

- Lowest Achievable Emission Rate (LAER)

- Engineering (applicability\precedent)

- Offsets (stipulated decrease relative to the requested increase)

- NAAQS and increment analyses don't apply

# Utah Minor Oil and Gas Source Requirements (1 of 2)

- **Permit exemption: Registered (true) minor well sites (<100 tpy) including centralized tank batteries**
  - Permit to obtain enforceable conditions (such as tank throughput)
- **Registration**
  - **Standard Industrial Classification code major group 13**
    - Oil and natural gas exploration, production, and transmission operations
    - Well production facilities
    - Natural gas compressor stations
    - Natural gas processing plants
    - Commercial oil and gas disposal wells
    - Evaporation ponds
  - **Permitted sources are exempt**
    - Effectively a Permit by Rule (PBR)

# Utah Minor Oil and Gas Source Requirements (2 of 2)

- **Utah 500 series oil and gas emission rules**
  - **Source types**
    - Tank truck loading
    - Storage vessels
    - Dehydrators
    - VOC control devices
    - Leak detection and repair
    - Natural gas engines
  - **Permitted sources are exempt**
- **Emission inventory**
  - **First was due for 2017 in April 2018**
  - **Every 3<sup>rd</sup> year**
  - **No EPA jurisdiction requirement**
  - **Being used for development of National Emission Inventory (NEI)**
    - **Eventually used in Uintah Basin State and Federal Implementation Plan (SIP\FIP)**
  - **EPA asked for participation for EPA jurisdiction sources (Not a requirement)**



# EPA Uintah Basin Goals<sup>1</sup>

- Clean air
- Continued, uninterrupted development of O&NG resources
- Consistent requirements between EPA jurisdiction and adjacent State of Utah jurisdiction
  - Avoid discouraging development in EPA jurisdiction

<sup>1</sup>May 18, 2018 Federal Register, Amendments to Federal Implementation Plan for Managing Air Emissions From True Minor Sources in Indian Country in the Oil and Natural Gas Production and Natural Gas Processing Segments of the Oil and Natural Gas Sector Preamble, II(A), Overview, Page 20779

# Indian Country (EPA) Minor Oil and Gas Permitting

- **Synthetic Minor Source Regulations**
  - Applies to attainment and nonattainment areas
  - Minor source construction or modification after 8/30/2011
  - Not subject to NNSR or PSD
  - Only option is permitting, not oil and gas Federal Implementation Plan (FIP)
  - EPA will require offsets for AQIA
  - Cultural resources and endangered species
- **True Minor Oil and Gas Source Regulations**
  - Applies to attainment or nonattainment areas
  - Register if beginning construction 8/30/11 – 10/2/16
  - Not subject to NNSR or PSD
  - For beginning construction or modification after 10/2/16
    - **Attainment areas:**
      - Register to comply with the oil and gas FIP – (effectively a Permit by Rule)
      - Or
      - Obtain a permit for new construction or modifications
    - **Nonattainment areas:**
      - FIP registration is no longer an option and only option is to obtain a permit
    - EPA will require offsets for AQIA (not registering) (“Compensating Emission Reductions”)
    - Cultural resources and endangered species

# Complex Uintah Basin Ozone True Minor Oil and Gas Approval Requirements

Uintah Basin New True Minor Oil and Gas Source Approval Requirements

Option	Type of New Source Construction\Modification Compliance	EPA Jurisdiction	State of Utah Jurisdiction	
Registering <sup>1</sup>	Attainment area option	YES	YES	
	Nonattainment area option	NO	YES	
	Types of analyses <sup>2</sup>			
	Cultural resource evaluation	YES	NO	
	Endangered species evaluation	YES	NO	
	Air Quality Impact Analyses	NO	NO	
	Includes fugitives	NO	YES	
	Minor source Best Available Control Technology Analysis	NO	NO	
Permitting	Attainment area option	YES	YES	
	Nonattainment area option	YES	YES	
	Types of analyses <sup>2</sup>			
	Cultural resource evaluation	YES	NO	
	Endangered species evaluation	YES	NO	
	Air Quality Impact Analyses <sup>3</sup>			
	Ozone	YES	NO	
	Modeling	NO	NO	
	Minor Source Emission offsets	YES	NO	
	NO <sub>2</sub>	YES	YES	
	Modeling	NO	YES	
	Minor Source Emission offsets	YES	NO	
	Includes fugitives	NO	YES	
Minor source Best Available Control Technology Analysis	NO	YES		

<sup>1</sup>Registering for the EPA national oil and gas FIP or the Utah registration and control requirements for oil and gas.

<sup>2</sup>This is not an all inclusive list of analyses but is a list of key analyses that differ between jurisdictions.

<sup>3</sup>Relative to a VOC emissions triggered facility. EPA is looking for VOC and NO<sub>x</sub> offsets rather than modeling for VOC emissions triggered sources. EPA may require modeling if only NO<sub>x</sub> emissions are involved.



# Proposed Changes to the National FIP

- **May 8, 2018 – EPA proposed amendments to the National Oil and Gas Federal Implementation Plan**
  - Would continue to apply the National O&NG FIP's streamlined authorization mechanisms in the Uintah Basin nonattainment area
  - Could be preempted by a Uintah Basin specific FIP
  - Has not been finalized

# Developing a New Reservation Specific O&G FIP

- National oil and gas FIP is no longer applicable in nonattainment area
- Not specifically required by regulations for marginal (Uintah Basin) nonattainment
- Ease the permitting burden and timeline for industry and EPA
- Earlier 2016\2017 attempt was never published for review and was withdrawn in February of 2017
- New rule is being drafted
  - Draft Stage – has not been published for review
  - Waiting for approval from Office of Management and Budget
  - Would preempt national FIP requirements

# Key Questions

- Will the new FIP cover all Indian Country or just nonattainment area?
- Will registering under national FIP still be an option in attainment areas (outside of nonattainment area)?
- How would EPA handle “compensating emission reductions” between sources
  - Same operator, different facilities
  - Different operators
- How would “compensating emission reductions” be handled between jurisdictions

# Questions? Discussion

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