

Overview of WRAP-ITEP Task 1.4

WESTAR-WRAP-TDWG Contract with NAU ITEP

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Task 1.4 Tribal O&G Emissions Inventory and Outreach

- 1) Contact Tribes in the WRAP region that are located in or near the large oil and gas development basins
 - Utilize key resources that have characterized emissions from these tribal lands e.g. products of the National Oil & Gas Emissions Analysis Project, to prepare materials of direct interest to the oil and gas producing tribes
 - With these materials in hand, reach out to key tribal professionals to facilitate their engagement in air quality matters associated with energy resource development and to inform them of opportunities and benefits of WRAP's air quality planning processes

Task 1.4 Tribal O&G Emissions Inventory and Outreach

- 2) Provide focused training and technical support to the applicable tribes as they participate in emissions inventory enhancement and development
 - Through at least one webinar, based on TDWG priorities, provide additional materials and information.

Primary Objective: Promote and justify active Tribal participation in WRAP

Tribal Title V Operating Permits

- Administered by EPA
- A major source that has actual or potential emissions at or above the major source threshold, 100 tpy for any air pollutant
- Lower thresholds apply in non-attainment areas, but only for the pollutants that are in non-attainment
- Major source thresholds for designated hazardous air pollutants (HAPs) are 10 tpy for a single HAP or 25 tpy for any combination of HAPs.
- With some exceptions, the EPA generally has not required non-major sources to get permits

Tribal Title V Operating Permits

- In 2012, the Southern Ute Tribe assumed from EPA the Title V Permitting Program – access to their website on 2/9/2019 indicates that they have issued 36 permits.
- Otherwise, Title V permitting records for Tribal lands are maintained on a Region by Region basis.
- As of 2016, EPA had issued 53 Title V permits for major sources on Tribal lands in regions 2, 5, 6, 8, 9, and 10.
- For access on 2/9/2019, Region 8's website indicates that there are 24 such permits for Tribal lands.

Tribal Minor NSR Operating Permits

- Administered by EPA
- Thresholds →
- “minor” is a misnomer; many minor sources with releases of regulated NSRPs under the thresholds are not covered by this permitting program

Table 4. Minor Tribal NSR Rule Thresholds

Regulated NSR Pollutant	For Nonattainment Areas (tpy)	For Attainment Areas (tpy)
Carbon monoxide (CO)	5	10
Oxides of nitrogen (NO _x)	5	10
Sulfur dioxide (SO ₂)	5	10
Volatile organic compounds (VOC)	2	5
PM	5	10
PM-10	1	5
PM-2.5	0.6	3
Lead	0.1	0.1
Fluorides	NA	1
Sulfuric acid mist	NA	2
Hydrogen sulfide (H ₂ S)	NA	2
Total reduced sulfur (including H ₂ S)	NA	2
Reduced sulfur compounds (including H ₂ S)	NA	2
Municipal waste combustor emissions	NA	2
Municipal solid waste landfills emissions	NA	10

Task 1.4 Tribal O&G Emissions

- Generally, states do not collect emissions data for reservations sources and they do not permit emissions from reservation and other trust lands
- Existing Data Sources
 - Proprietary Industry Databases of individual O&G wells – *no emissions data*
 - Not used for our project – can only do limited visual comparisons – a valuable data source
- EPA region by region databases of Title V and mNSR permitted sources (***used for this effort***)

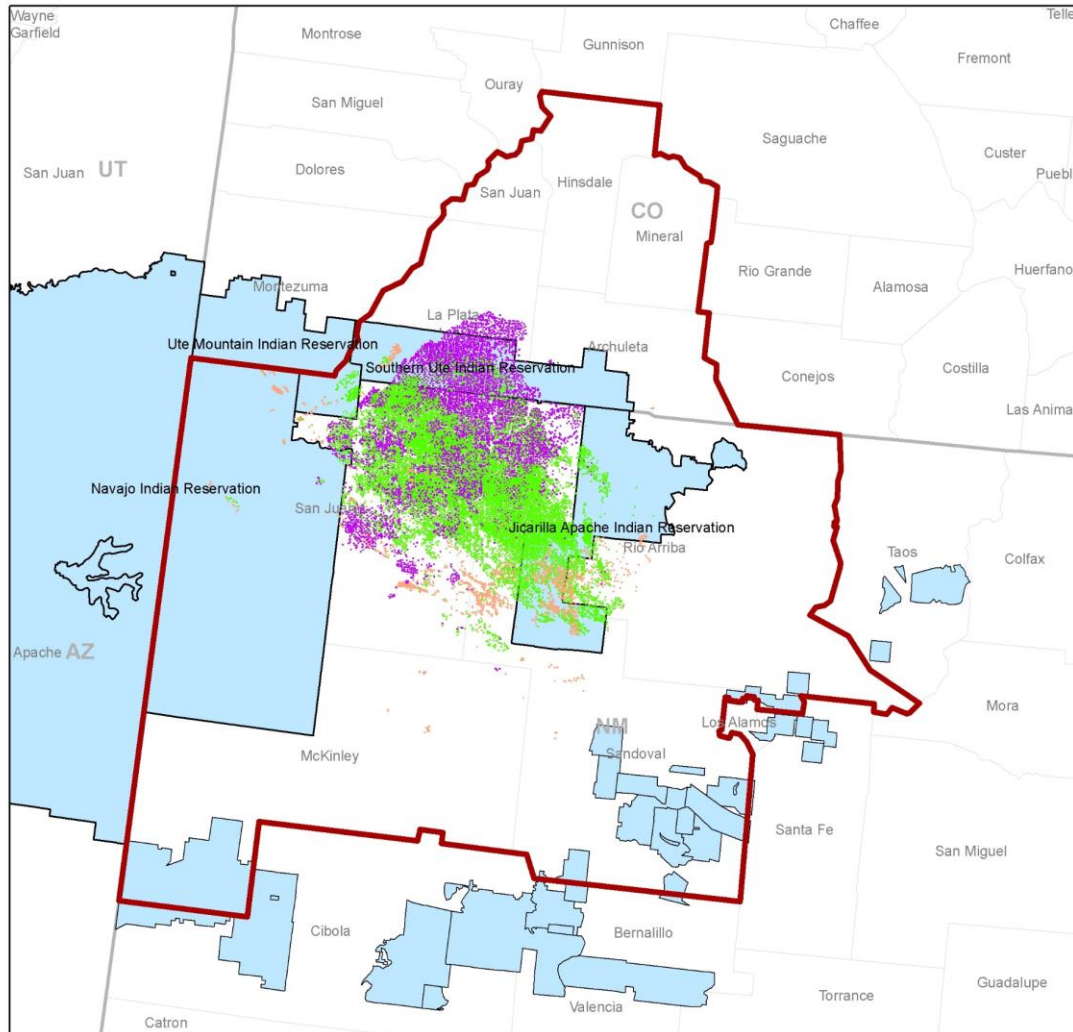
Task 1.4 Tribal O&G Emissions

- Data sources used by OGWWG, e.g., 2014 Baseline Greater San Juan and Permian Basin report (Nov. 2017):
 - *...well count and production activity from a commercially available database of O&G data maintained by IHS Corp., data from state and EPA permits, and input factors based on detailed survey or developed from existing studies. Some additional data sources were also used...*
- *We also relied on this inventory for our effort*

Task 1.4 Tribal O&G Emissions

- Data sources used by OGWG, e.g., 2014 Baseline Greater San Juan and Permian Basin report (Nov. 2017) for midstream sources (compressor stations, gas plants, etc.):
 - Title V major and mNSR sources from NMED permit data
 - Major and minor sources from Colorado Department of Public Health and Environment (CDPHE) permit data
 - Title V major sources and mNSR sources on tribal land from US EPA Regions 6, 8, 9
 - Midstream point source emissions from the 2014 NEI v1.04

San Juan Basin



Legend

- San Juan Basin
- Tribal Lands
- Gas Wells
- CBM Wells
- Oil Wells



0 15 30 60 90 120 Kilometers

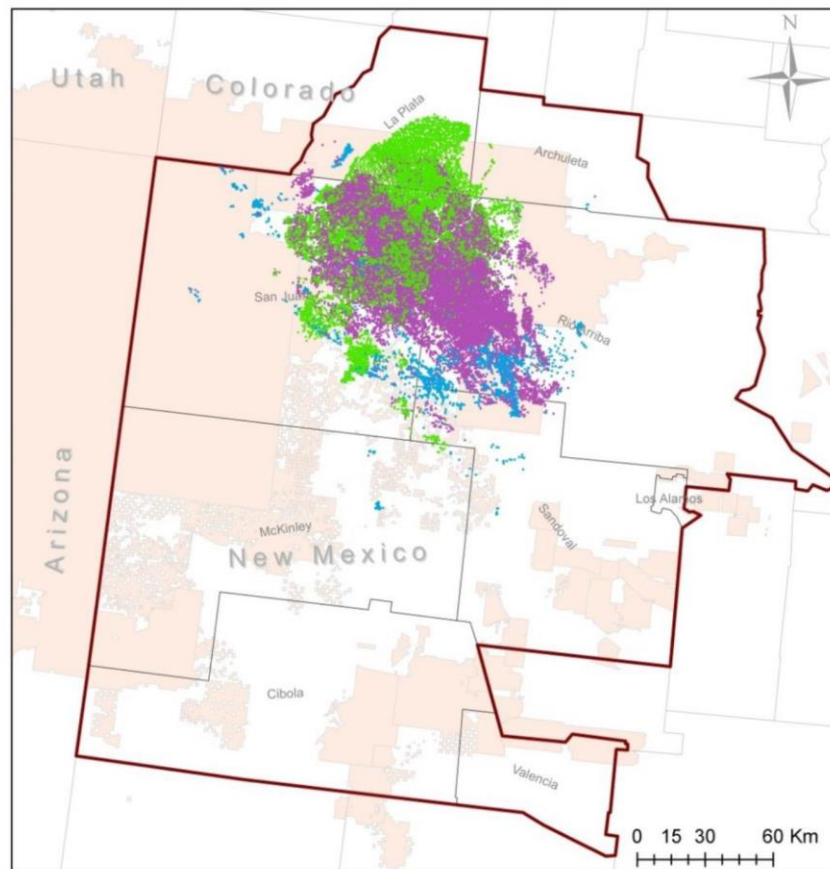
San Juan Basin (Combination of 2008 WRAP designated North and South San Juan Basins)

Oil and gas wells from IHS (proprietary) data base



Illustration from 2017 Final Report *Development of Baseline 2014 Emissions from Oil and Gas Activity in Greater San Juan Basin and Permian Basin Final Report*

Note: This basin definition is not the same as WRAP's Greater San Juan Basin definition, which also includes Cibola County and Valencia County – following the GHGRP Subpart W definition

Greater San Juan Basin



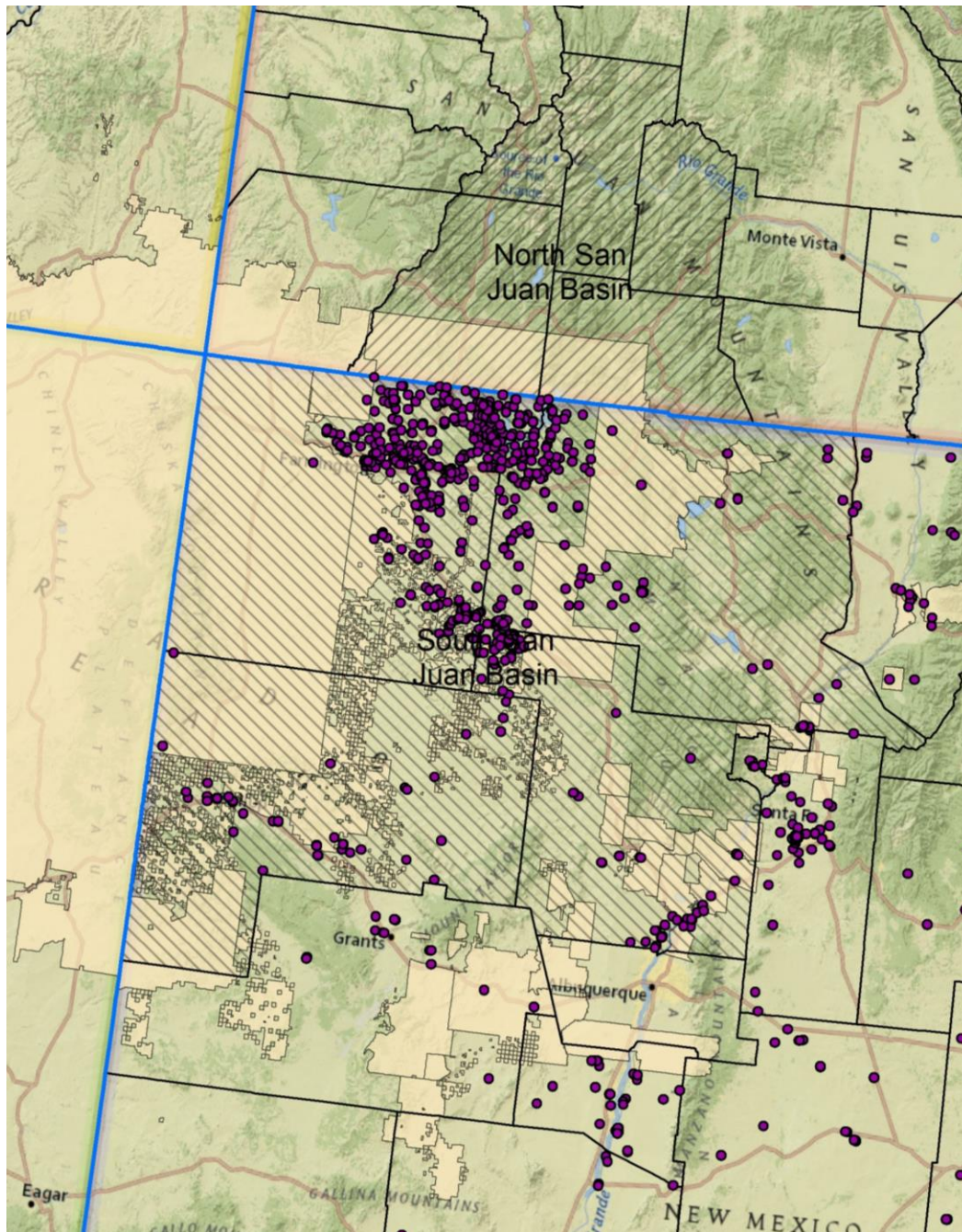
Legend

-  Greater San Juan Basin (consistent with GHGRP Subpart W definition)
-  Tribal Lands

Well Type

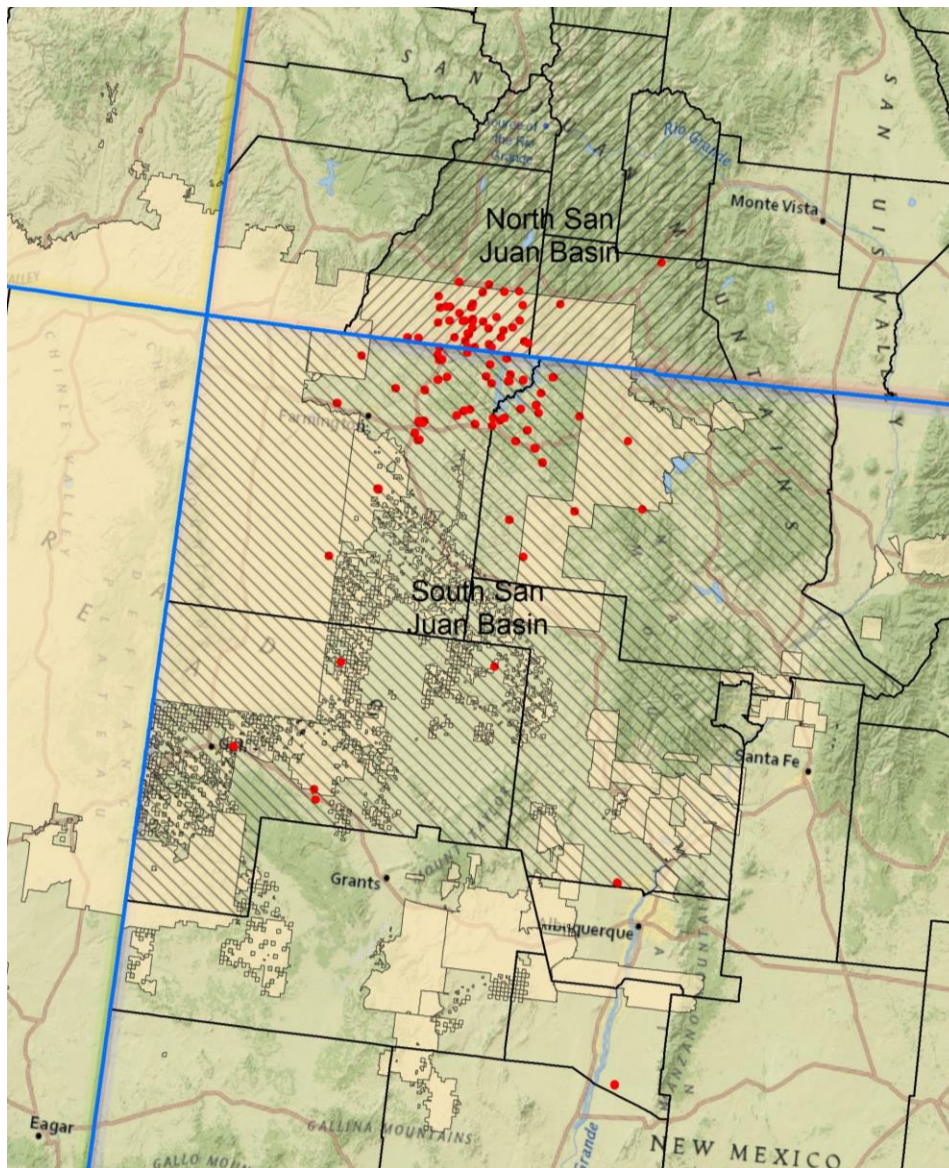
-  Oil
-  CBM
-  Gas

Figure 1-1. Greater San Juan Basin boundaries overlaid with 2014 oil and gas well locations by well type.⁸



San Juan Basin (Combination of 2008 WRAP designated North and South San Juan Basins)

Oil and gas related emission sources from State of New Mexico database (2018 edition)



San Juan Basin (Combination of 2008 WRAP designated North and South San Juan Basins)

2014_San_Juan_Basin_O&G_EI_Summary_082917_permitted_sources file (WRAP)

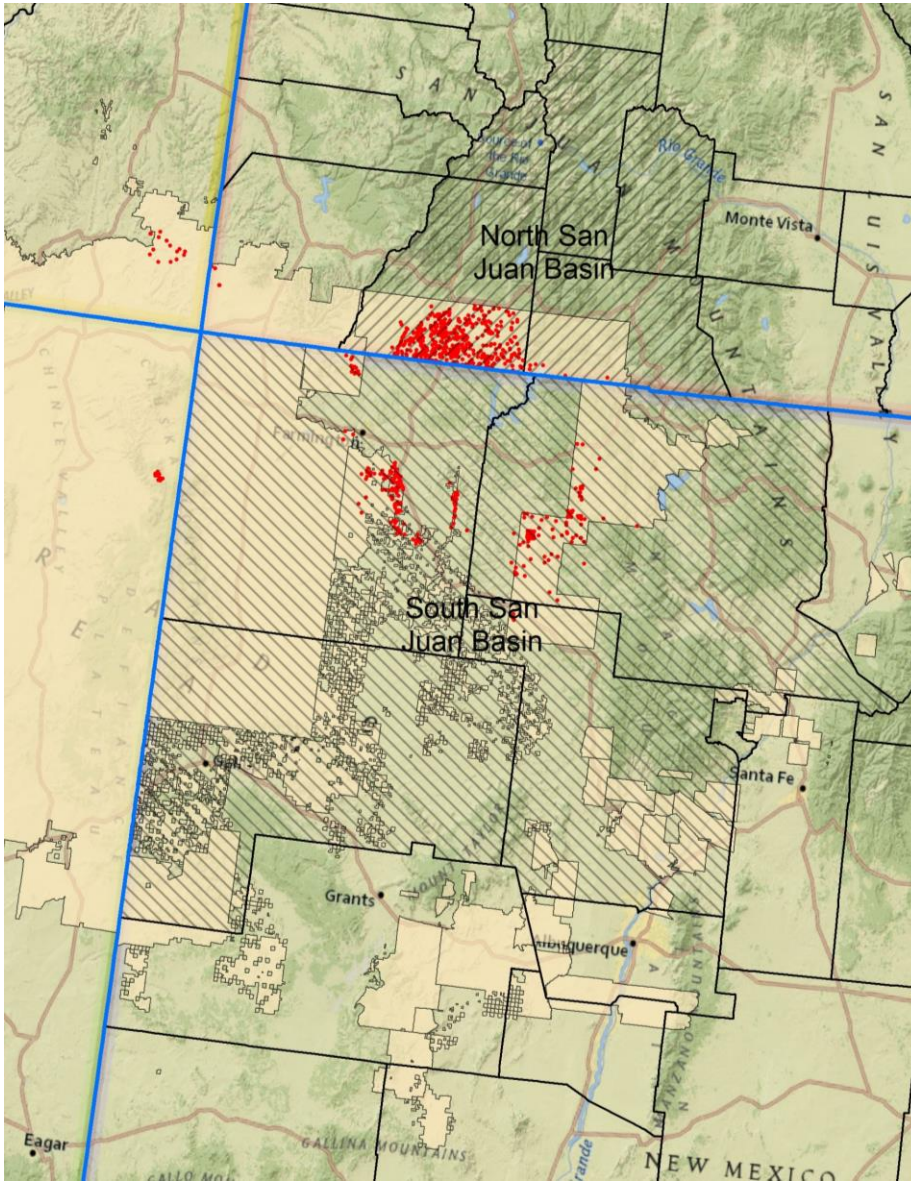
Nearly 880 permitted sources

Mainly midstream sources

Many of these sources plot on top of other, e.g., compressor station sources, as they have identical coordinates

Task 1.4 Tribal O&G Source & Emissions Inventory

- ITEP reached out to USEPA Regions 6, 8 & 9 staff and received copies of spreadsheets that they use to internally track Title V and mNSR operating permits
- These spreadsheets were used to develop a contemporary inventory of Title V and mNSR Excel-based database of mNSR & Title V sources for the 3 regions.



Task 1.4 Tribal O&G Source and Emissions Inventory

San Juan Basin (Combination of 2008 WRAP designated North and South San Juan Basins)

Tribal Lands Title V and mNSR emissions sources – obtained from USEPA Regions 6, 8 & 9 for this effort

Nearly 740 permitted sources

Midstream sources, some wells – sometimes lumped together

Emission sources are organized by ITEP according to Reservation and EPA Region

11/7/18 R6 Tribal mNSR
Registration Emissions
Report: columns and
example entries (not every
source null entries for
pollutants)

16 Tribes, 196 sources,

Approximately 130 Tribe-
related entries for R6 NM –
all Jicarilla Apache Nation

R6 has records of five Title V
Major Source Permits – all
for compressor stations – 2
for the Pueblo of Laguna
and 3 for the Jicarilla
Apache Nation

Region	R6
Tribal Code	820
Tribe Name	Absentee-Shawnee Tribe of Indians of Oklahoma
Company Name	XTO Energy Inc
Source Name	Jicarilla Apache 13 F
Latitude	36.44325
Longitude	107.3663611
Type of Operation	Oil and/or Gas Production
NAICS Code	
SIC Code	1311
Registration Receipt Date	3/12/2012
Temporary Sources	
Portable Sources	
Tribe Owned	No
Source Address	
Actual PM	
Actual PM10	
Actual PM25	
Actual SOx	
Actual NOx	
Actual CO	
Actual VOC	
Actual Pb	
Actual NH3	
Actual Fluorides	
Actual H2SO4	
Actual H2S	
Actual TRS	
Actual RSC	
Allow. PM	
Allow. PM10	
Allow. PM25	
Allow. SOx	
Allow. NOx	
Allow. CO	
Allow. VOC	
Allow. Pb	
Allow. NH3	
Allow. Fluorides	
Allow. H2SO4	
Allow. H2S	
Allow. TRS	
Allow. RSC	

Reference

- For a recent review of O&G-related air quality issues in Indian Country, see: *The Control of Air Pollution on Indian Reservations* by A.W. Reitze, Jr., Env. Law v. 46, 2016

Observations

- In this illustrative basin (San Juan), there are thousands of O&G sources – mostly unregulated / unpermitted, with apparent emissions that fall under past and present minimum thresholds for reporting and permitting.
- Depending on dataset(s) viewed, Tribal representatives, environmental O&G-related staff, and community members may come away with a very different view of on-reservation and adjoining activity, as well as have different perceptions as to contributions of sources in their vicinity to RH and acute air-pollution and related health impacts on their communities and themselves.
- There is considerable reconciliation among source inventories and source portrays that needs to happen going forward, and there are clear benefits to Tribes of having a comprehensive inventory – which in many instances requires their active participation.
- → Outreach Actions and Opportunities

Recommendation

- As WRAP and its committees move forward with model development and simulations of 2014 conditions, there is an opportunity to engage Tribes to participate actively in final checking on emissions inventories in Indian country and in modeling matters (broadly defined) so that they have a stake in both the process, the objectives and the outcomes.
- Promoting such active engagement could be a cornerstone of ITEP's planned outreach under its Task 1.4

Task 1.4 Tribal O&G Outreach

- The WRAP O&G Emissions Workgroup (OGWG) 2014 O&G Basin Inventories for 13 basins were used with GIS tools to identify the following Tribes for outreach.

Reservation (Excepting Rosebud, all of these are entirely or partially within the WRAP-defined O & G basins)	Tribe(s)	State(s)	EPA Region
Blackfeet Indian Reservation	Blackfeet Nation	MT	8
Crow Reservation	Crow Tribe	MT	8
Fort Berthold Reservation	MHA Nation - Three Affiliated Tribes of the Fort Berthold Reservation	MT	8
Fort Peck Indian Reservation	Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation	MT	8
Jicarilla Apache Nation Reservation	Jicarilla Apache Nation	NM	6
Navajo Nation Reservation	Navajo Nation	AZ, UT, NM	9
Southern Ute Reservation	Southern Ute Indian Tribe of the Southern Ute Reservation	CO	8
Uintah and Ouray Reservation	Ute Indian Tribe	UT	8
Ute Mountain Reservation	Ute Mountain Tribe of the Ute Mountain Reservation	CO, NM	8
Wind River Reservation	Arapahoe Tribe and Eastern Shoshone Tribe	WY	8

Task 1.4 Tribal O&G Outreach

- Outreach to a set of initial contacts will commence in March of 2019
- Rather than having aggressive objectives and milestones, this outreach is intended to
 - create WRAP awareness and initiate dialogue with Tribal environmental and O&G professionals where there has been none;
 - continue dialogue and reacquaint Tribal professionals with WRAP where dialogue has faltered; and
 - maintain dialogue and WRAP awareness with those O&GE Tribes who are active in WRAP
- Outreach actions, observations, and preliminary indications will be summarized in a brief narrative memo