

COMPARE EPA 2016V2 TO WRAP OGWG EMISSION INVENTORY

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TOPICS

- Overview of Results for Task A: EPA's Integration of WRAP OGWG Inventory into 2016v2
- Overview of Task B: Review of 2020 O&G Tool Input Factor Updates Based on WRAP OGWG Survey Results

TASK A: EPA'S INTEGRATION OF WRAP OGWG INVENTORY INTO 2016V2

- 7 States: CO, MT, NM, ND, SD, UT, WY

Inventory Component	2016v2 Basis ^a
Historical Year	
Point Sources	WRAP OGWG circa 2014 baseline
Nonpoint Exploration Sources	2017 NEI O&G Tool
Nonpoint Production Sources	WRAP OGWG circa 2014 baseline
Future Year (2023 from 2016v2)	
Point Sources	WRAP OGWG future year
Nonpoint Exploration Sources	WRAP OGWG future year
Nonpoint Production Sources	WRAP OGWG future year

^a Source: Nov. 8 presentation by Jeff Vukovich to WRAP OGWG

POINT SOURCES – HISTORICAL AND FUTURE YEARS

Historical Year

State	Circa 2014- WRAP OGWG	2016 V2 Modeling Platform	Percentage Difference
VOC			
Colorado	12,141	12,031	-1%
Montana	897	897	0%
North Dakota	1,825	1,825	0%
New Mexico	18,033	18,033	0%
South Dakota	13	13	0%
Utah	85,127	84,733	0%
Wyoming	18,097	17,911	-1%
NOx			
Colorado	17,378	17,270	-1%
Montana	1,602	1,602	0%
North Dakota	5,179	5,179	0%
New Mexico	31,031	31,031	0%
South Dakota	435	435	0%
Utah	14,534	14,534	0%
Wyoming	13,294	12,938	-3%

Future Year

State	WRAP OGWG Future Year	2016 V2 Modeling Platform	Percentage Difference
VOC			
Colorado	12,111	12,013	-1%
Montana	864	864	0%
North Dakota	5,587	5,587	0%
New Mexico	32,934	32,934	0%
South Dakota	13	13	0%
Utah	51,338	51,180	0%
Wyoming	16,370	16,246	-1%
NOx			
Colorado	14,738	14,673	0%
Montana	1,440	1,440	0%
North Dakota	15,859	15,859	0%
New Mexico	44,062	44,062	0%
South Dakota	435	435	0%
Utah	9,089	9,089	0%
Wyoming	10,824	10,600	-2%

- As expected, points sources are consistent for historical and future years

Percentage difference = (EPA-WRAP)/WRAP

NONPOINT SOURCES – HISTORICAL YEAR

Exploration Phase

State	Circa 2014- WRAP OGWG	2016 V2 Modeling Platform	Percentage Difference
VOC			
Colorado	1,871	15,321	719%
Montana	1,321	40	-97%
North Dakota	23,338	5,830	-75%
New Mexico	5,255	2,900	-45%
South Dakota	104	2	-98%
Utah	3,141	617	-80%
Wyoming	158,624	1,255	-99%
NOx			
Colorado	5,936	5,602	-6%
Montana	1,642	130	-92%
North Dakota	31,630	8,350	-74%
New Mexico	7,999	2,103	-74%
South Dakota	129	0	-100%
Utah	130	200	54%
Wyoming	24,401	515	-98%

Production Phase

State	Circa 2014- WRAP OGWG	2016 V2 Modeling Platform	Percentage Difference
VOC			
Colorado	123,443	123,454	0%
Montana	34,694	34,665	0%
North Dakota	278,920	278,920	0%
New Mexico	161,980	161,403	0%
South Dakota	9,333	9,333	0%
Utah	24,216	24,536	1%
Wyoming	88,101	88,287	0%
NOx			
Colorado	20,774	20,776	0%
Montana	3,987	3,987	0%
North Dakota	30,717	30,717	0%
New Mexico	42,158	42,075	0%
South Dakota	357	357	0%
Utah	1,715	1,715	0%
Wyoming	8,476	8,832	4%

- Exploration phase: As expected, emissions are inconsistent. WRAP used 2014 and EPA used 2016 exploration activity data.
- Production phase: As expected, emissions are consistent.

Percentage difference = (EPA-WRAP)/WRAP

NONPOINT SOURCES – FUTURE YEAR

Exploration & Production Phases

State	WRAP OGWG Future Year	2016 V2 Modeling Platform	Percentage Difference
VOC			
Colorado	65,225	64,636	-1%
Montana	28,401	28,417	0%
North Dakota	314,080	306,268	-2%
New Mexico	195,399	195,520	0%
South Dakota	4,774	4,692	-2%
Utah	16,540	17,159	4%
Wyoming	93,220	52,542	-44%
NOx			
Colorado	28,812	27,741	-4%
Montana	3,693	4,218	14%
North Dakota	57,500	55,862	-3%
New Mexico	50,188	51,064	2%
South Dakota	328	234	-28%
Utah	1,462	2,065	41%
Wyoming	13,509	7,807	-42%

- Unexpectedly, nonpoint source emissions are inconsistent.
- It appears that differences are mostly due to exploration phase source categories.

Deliverable spreadsheet to be provided today

Percentage difference = (EPA-WRAP)/WRAP

TASK B: REVIEW OF 2020 O&G TOOL INPUT FACTOR UPDATES BASED ON WRAP OGWG SURVEY RESULTS

- EPA presented and provided relevant data and materials at the Nov. 8 WRAP OGWG meeting
- Ramboll has screened this data and is developing the review analysis
- Review analysis focused on integration of WRAP OGWG survey inputs (e.g., equipment characteristics, annual operation, emission rates).

Deliverable: Memorandum due Dec. 9

END