

# **WRAP OGWG: O&G EI**

## **PHASE 2 STATUS UPDATE**

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# OUTLINE

- Baseline Inventory
- Future Year OTB&OTW: 3 scenarios
- Future Year Additional Controls
- Program Review Task

# BASELINE INVENTORY

- Deliverables available on WRAP OGWG website: <https://www.wrapair2.org/OGWG.aspx>
  - Baseline Inventory: [technical memo](#) | [spreadsheet](#) | [gas profiles](#)
  - Survey
    - [WRAP OGWG Survey Data Collection Synthesis Memo, Ramboll](#)
    - [Complete survey, Fleet turnover and controls-focused survey](#)
  - Base Case:
    - [2014 base case \(v1\) emission inventory spreadsheet](#)
    - [2014 oil and gas activity spreadsheet](#)
- In-progress
  - SMOKE-inputs development for WRAP Modeling and 2016 Emission Platform Collaborative

# FUTURE YEAR OTB & OTW – SCENARIO 1

- Medium Scenario: “Continuation of Historical Trends”
- Will be used in regional haze modeling
- Base to Future Year Activity Change: O&G growth/decline assumptions developed with state agency input
- Emission Controls:
  - Emission rates for basin/well type/spud type combinations with steady or declining activity will be assumed unchanged from base year
  - Controls analysis for basin/well type/spud type combinations where substantial growth is occurring:

Basin Name	Well Type(s)	Spud Type(s)
Denver Basin	Oil	H
Williston Basin	Oil	H
Permian Basin	Oil	H
Permian Basin	Gas	H
Arctic Coastal Plains Province	Oil	H
Uinta Basin*	Oil / Gas	H
Green River Basin	Gas	D

99% oil production  
93% gas production  
81% well count

## FUTURE YEAR OTB & OTW – SCENARIO 2

- Low Scenario: Reduced Legacy Well Activity
- Activity:
  - Legacy (vertical) wells: Legacy wells retire more quickly (twice as fast as medium scenario)
  - Multi-stage fracing (horizontal) wells: same as medium scenario
- Controls: no controls analysis

# FUTURE YEAR OTB & OTW – SCENARIO 3

- High Scenario: Increased Horizontal Well Activity
- Activity:
  - Multi-stage fracing (horizontal) wells: Increase in O&G activity by a percentage to be determined, tiered to medium scenario estimates
  - Legacy (vertical) wells: same as medium scenario
- Controls: no control analysis

# FUTURE YEAR OTB & OTW – DELIVERABLES/SCHEDULE

- 9/6: Scenario 1 Draft Report, Spreadsheet
- 9/16: Comments due on Scenario 1
- 9/26: Scenario 1 Revised Draft Report, Spreadsheet, SMOKE Inputs (WRAP Modeling and 2016 National Collaborative)
- End of October: Scenario 1, 2, and 3 Draft Final Report (inclusive of all scenarios), spreadsheets

# ADDITIONAL REASONABLE CONTROLS

- Provide menu of potential emission controls with emission reduction percentage from uncontrolled/existing, cost effectiveness, and other metrics relevant to 4-factors analysis
  - Focus: Categories with substantial NO<sub>x</sub> emissions (e.g, midstream engines, wellhead compressor engines, artificial lift engines, flares, heaters, drill rigs, fracing engines)
  - Agencies select control measures and prevalence to apply in their jurisdiction
- Agency selected controls will be applied in SMOKE for CAMx modeling of Additional Reasonable Controls

Four statutory factors [40 CFR 51.308(f)(2)(i)] relevant to inventory analyses

- Cost of compliance
- Time necessary for compliance
- Energy and non-air quality impacts of compliance
- Remaining useful life of any potentially affected major/minor stationary source or group of sources



# ADDITIONAL REASONABLE CONTROLS

- **Deliverable:**

- Report/memo and likely a spreadsheet-based controls menu

- **Schedule**

- Complete work in 2019
- More details at next WRAP OGWG teleconference in early-October

# AGENCY PROGRAM REVIEW TASK

- Emphasis will be on describing state programs
- Starting point
  - [OGWG Road Map: Phase I Report Appendix A](#) (On-the-Books Regulations Tables)
- Scope
  - To include elements similar to previous 2013 program review <https://www.wrapair2.org/Analysis.aspx>
  - Write-up on individual state programs will be leaner than 2013 program review
  - Focus will be on comparison of elements across programs (e.g., side-by-side tables)
- Schedule
  - Early Nov: draft report/memo
  - Early Dec: final report/memo
  - Complete work by end of 2019
  - More details during next WRAP OGWG meeting in early-October

# QUESTIONS?