



## WRAP Oil and Gas Emissions Inventory Project Overview Greater San Juan Basin

September 2015

### Overview

The Bureau of Land Management (BLM) New Mexico State Office is sponsoring development of an oil and gas (O&G) emissions inventory for the Greater San Juan Basin in New Mexico and Colorado. The [Western Regional Air Partnership](#) (WRAP), with expert contractor assistance, will build and report the inventory using the [WRAP Phase III methodology](#) employed in large active basins in the intermountain West. The result will be an accurate, comprehensive criteria pollutant inventory of actual emissions for most major point and area sources associated with exploration and production of O&G in the Greater San Juan Basin for year 2014, as well as a mid-term projection year.

The first phase of this effort to collect emission inventory input data, including well site survey data and midstream permit data, is underway. The second phase of this effort will be to compile O&G emission inventories for 2014 and a midterm projection year and will take place following completion of the first phase.

One benefit of the project is development of more accurate regional O&G emission inventory data based on input from knowledgeable sources. The previous San Juan Basin emission inventories compiled by WRAP<sup>1</sup> were based on data collected for the year 2006; the gathering of 2014 survey data and estimation of a 2014 emission inventory based on that data will also increase the accuracy of San Juan Basin O&G emissions inventory data. The project will also contribute to regional air quality modeling efforts and streamline future National Environmental Policy Act (NEPA) reviews by reducing the need for project-specific modeling.

Scope of Work – The Project Webpage is established at:

<http://www.wrapair2.org/SanJuanPermian.aspx>

This effort will focus on surveys of producers to update and gather data used to calculate emissions of the criteria pollutants (NO<sub>x</sub>, CO, VOCs, PM and SO<sub>x</sub>) and greenhouse gases (CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O). Ramboll-Environ is working for WRAP to prepare and analyze the surveys. Airstar Consulting is working for Ramboll-Environ as the project survey coordinator and primary industry contact. WRAP's contractors will coordinate participation and data collection from producers in the Basin. The survey data will be confidential and presented only in the aggregate for each basin. In parallel, for each basin, the contractors will work with the air regulatory agencies (New Mexico Environment Department - Air Quality Bureau, Colorado Department of Public Health and Environment - Air Pollution Control Division, and EPA Region 6, 8, and 9) to verify and update emissions for permitted O&G point sources in the 2014 base year. Producers will provide detailed area source data via surveys to supplement these point source data. Reviewing permitted point source data and applying the area source survey results will provide inputs that will allow the

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<sup>1</sup> <http://www.wrapair2.org/PhaseIII.aspx>

estimation of a comprehensive inventory of air pollutants covering most major O&G activities in the basin by mineral estate ownership: 1) federal, 2) trust (Indian allotted and tribal) 3) state, and 4) private (fee). The federal mineral estate will also include two (2) subparts, one associated with the decision space for National Forest System Lands, and the other with the decision space for lands under the jurisdiction of the BLM.

Work products consisting of a technical memorandum and spreadsheets for each basin will reside on the WRAP website.

Project Schedule – Phase 1 (Emission Inventory Inputs Development) of this project began in May 2015 and will be completed in December 2015. Phase 2 (Emission Inventory Development) will occur following completion of Phase. The schedule for Phase 2 (Emission Inventory Development) has not yet been developed

**Updated Project Schedule for Phase 1 Greater San Juan O&G Emissions Inventory Project**

| <b>Task Description</b>  | <b>Target Date</b>          |
|--|-----------------------------|
| Identify Affected Companies, Tribes, Agencies & Proper Contacts          | <b>Completed</b> 6/2015     |
| Hold Initial Project Explanation Meetings @ Farmington                   | <b>Completed</b> 6/22-23/15 |
| Solicit Minor Source Data from State/Federal Agencies                    | <b>Completed</b> 7/2015     |
| Hold Telephone Call Explaining Project Data Collection Proposal          | <b>Completed</b> 7/22/15    |
| Solicit/Receive Data Elements & Inventory Procedures Comments            | <b>Completed</b> 7/2015     |
| Prepare/Distribute Project Response to Received Comments                 | <b>Completed</b> 8/2015     |
| Distribute Confidentiality Agreements to Basin Operators                 | <b>Completed</b> 8/20/15    |
| Prepare/Distribute Draft Survey Instrument for Operator Preview          | Early September             |
| Accept Comments on the Draft Survey Instrument (2 weeks)                 | Mid September               |
| Distribute Final Survey Instrument With Request for Data                 | Late September              |
| Companies Complete/Submit Survey Instruments                             | Mid November                |
| Compile Query Data   | Late November               |
| Complete Memoranda/Spreadsheets of SJB EI Inputs Development             | Mid December                |
| Final Project Call to Present Results to Participants/Interested Parties | Late December               |

Deliverables

Phase I: Emission Inventory Inputs Development

- Collection/analysis of producer survey results in each basin, based on information about number and type of equipment and activity levels;
- Updated permitted point source data for each basin.

Phase II: Emission Inventory Development

- Basin-, mineral estate-, and county-level criteria pollutant emissions inventory data for 2014 and a future projection year, and
- Comprehensive regional criteria pollutant emissions for the O&G sector.

## Contacts

|                |                             |  |              |
|----------------|-----------------------------|--|--------------|
| Tom Moore      | WRAP/WESTAR                 | <a href="mailto:tmoore@westar.org">tmoore@westar.org</a>               | 970-491-8837 |
| Amnon Bar-Ilan | Ramboll Environ             | <a href="mailto:abarilan@environcorp.com">abarilan@environcorp.com</a> | 415-899-0700 |
| Lee Gribovicz  | Airstar Consulting          | <a href="mailto:airstar0077@gmail.com">airstar0077@gmail.com</a>       | 307-333-1527 |
| Mary Uhl       | BLM New Mexico State Office | <a href="mailto:muhl@blm.gov">muhl@blm.gov</a>                         | 505-954-2174 |

## Technical

### Part I: Emission Inventory Inputs Development

1. Production statistics compilation – including well counts, spud counts, and gas, oil and condensate production;
2. Pre-survey research – conduct research/interviews to identify emission sources or operations that are unique to the basin and also identify any new emission source types that should be included in the inventory.
3. Survey process – conduct survey focusing on the most active and/or highest producing companies in the basin and request data on wellhead equipment and processes and some midstream sources that would be considered survey-based (i.e., for which no permits exist); the survey process would include identification of companies, outreach, development of a survey instrument, transmittal of surveys, and compilation of the survey data.
4. Survey data aggregation and development of emission inventory input factors – aggregate survey results using a production-weighted methodology and develop representative emission inventory input factors to be used to calculate emissions from survey-based source categories.
5. Permit data compilation – work with air quality agencies within the States of New Mexico and Colorado and the EPA regional offices to obtain permit data for larger sources such as gas processing plants and large compressor stations.

### Part II: Emission Inventory Development

1. Final baseline inventories would be compiled from the survey-based emission inventory input factors and the permitted point source data.
2. Projected future activity –planned activities in the basin would be compiled from Regional Management Plans and other relevant data sources for purposes of the “midterm” projected inventories; including future well development and well decline curves, and these would be combined with historical data to generate scaling factors for each of the key production statistics for a future year of interest (to be determined by BLM and study participants).
3. Controls analysis – for purposes of the midterm projected inventories, analysis will be conducted to determine the impact of regulatory requirements on the inventories, including any state or federal regulations that would impact O&G source categories.
4. Midterm projected inventories – the activity projections in Step 2 would be used to generate “uncontrolled” projected emissions for each basin, and the controls analysis in Step 3 would be used to adjust these uncontrolled projections to develop final midterm emissions projections for each basin.