

W E S T E R N S T A T E S A I R R E S O U R C E S C O U N C I L



April 29, 2016

Ms. Stephanie Valentine
Air Grant Project Officer
U.S. EPA – Region 9
75 Hawthorne Street, Air-1
San Francisco, CA 94105

Subject: WESTAR 2016 Q1 Report
Grant # XA-00T68001 (Core Grant 2011-2013)
Grant # XA-99T15201 (Core Grant 2014-2016)

Dear Ms. Valentine,

Enclosed please find WESTAR's Quarterly Report for the period January 1, 2016 through March 31, 2016 for your review. This report includes activity and budget summaries for all of the projects WESTAR worked on over the reporting period. Specific activity summaries and budget reports may be accessed directly by following the links on the first page of the report.

Sincerely,



Mary Uhl
Executive Director
Western States Air Resources Council

Enclosures

CC: Sara Bartholomew
Colleen McKaughan



WESTAR QUARTERLY REPORT

Reporting Period: 1st Quarter 2016

Report Date: April 30, 2016

EPA Grant No. XA-00T82602

NPS Agreement No. P14AC00099

Task 2: P14AC01122-TA

Task 3: P15AC01632

BLM/JFSP Agreement No. L14AC00008

BLM Agreement No. L14AC00077

New Mexico P.O. #66700-0000025413

Regardless of funding source, all of the projects and activities conducted by WESTAR are consistent with and intended to achieve the purposes of the organization spelled out in Article 2 of WESTAR's Articles of Association, including promoting the exchange of information related to air quality management, developing procedures to meet air quality objectives and to protect environmental resources, to establish workgroups to investigate specific topics, and to develop recommendations for the consideration of the membership. This report summarizes activities and outcomes for this reporting period.

Reporting Organization:

Name: Western State Air Resources (WESTAR)
DUNS#: 1460040020000
Address: 3 Caliente Road #8
Santa Fe, NM 87508
Telephone: (505) 954-1160

Contents

- 1) [EPA Core Grant 2014-16](#) (XA-00T82602)
- 2) [NPS Cooperative Agreement](#) (P14AC00099)
 - [Task 2: P14AC01122-TA](#)
 - [Task 3: P15AC01632](#)
- 3) [BLM/JFSP Cooperative Agreement](#) (L14AC00008)
- 4) [BLM Air Quality Modeling Western States Project](#) (L14AC00077)
 - [Drill Rig Monitoring Study](#)
 - [New Mexico Oil and Gas Emission Inventory](#)
- 5) [New Mexico Dona Ana Modeling Contract](#)
- 6) [Fire Emissions Tracking System 2014 Activity Data for EPA Fire NEI](#)
- 7) [Other Significant WESTAR Activities](#)
- 8) [Consolidated Expense Summary](#)

1. EPA CORE GRANT 2014-16

Note: Work on activities and spending against this grant began October 2014.

a. Activity Summary: Operations Project

The purpose of the Operations project is to develop, implement, and support the policy and technical activities at WESTAR that benefit member states. Funding for this project comes entirely from member state contributions. In addition, personnel from member states and federal land management agencies contribute their time and expertise to many of the tasks performed under this project.

1) Status of work plan activities – Operations Project

<i>Expected Result for Project Period</i>	<i>Results/Outcomes</i>	
	<i>2016 Q1</i>	<i>Project Period Total</i>
27 Air director conference calls, documented with minutes posted on WESTAR's website	2	15
6 Business meetings, documented with minutes and presentations posted on WESTAR's website	0	3
120 Committee and ad hoc workgroup conference calls	16	95
12 Trips by committee chairs to brief air directors on committee activities	0	3
3 Specialty conference on a high priority topic	0	0
3 Meetings held to address emerging topics	1	1
9 Trips by committee representatives to attend national meetings and report back to WESTAR membership	1	5

2) Other Activities this Quarter – Operations Project

- WESTAR completed comments on EPA Exceptional Events proposal and associated ozone and wildfire guidance.
- WESTAR continued to engage with NESCAUM and EPA on the development of a cord wood test method.
- WESTAR work groups on the SO2 Data Requirements Rule, Regional Haze and background ozone met during the quarter via conference call to discuss these air quality issues.

b. Activity Summary: Training Project

The purpose of the Training Project is to: (1) deliver high quality training courses/workshops that meet the needs and expectations of state and local air agency staff within the fifteen-state WESTAR region; (2) develop needed, cost-effective, responsive, and western-states-focused training opportunities; and (3) act as the main point of contact for information and educational training opportunities related to air quality training.

1) Status of work plan activities – Training Project

<i>Expected Result for Project Period</i>	<i>Results/Outcomes</i>	
	<i>2015 Q3</i>	<i>Project Period Total</i>
69 Educational opportunities developed and delivered:	4	34
* CAMx – Basic (Novato, CA)		
* CAMx – Advanced (Novato, CA)		
* SIP Training (Salt Lake City, UT)		
* Advanced Inspector Training (Seattle, WA)		
1800 Students trained	92	910
3450 Student training days	213	1937
1 Training course developed/updated	0	0

2) Other Activities this Quarter – Training Project

- WESTAR spearheaded updates to State Implementation Planning (SIP) 101 training course, and provided funds to incorporate updates.
- WESTAR staff continues to work with EPA and other MJOs on the design, development and updating of various APTI training courses including quality assurance/quality control; oil and gas; continuous emission monitoring; and state implementation plan (SIP 101).
- WESTAR staff participates on conference calls with the APTI-Learn.net Team to identify improvement and enhancement opportunities, and provide recommendations to enhance the user's experience with APTI-Learn.
- WESTAR's staff provides leadership on the Clean Power Plan (CPP) to its member agencies by disseminating information about upcoming meetings and conferences, assisting western air quality agencies with their understanding of the impacts of the proposed CPP and compliance options, and by identifying critical/important topics for face-to-face meetings and conference calls.
- WESTAR staff collaborates with stakeholders outside of the air pollution program such as the Center for New Energy Economy (CNEE), Western Interconnect Energy Board (WIEB), Western Electricity Coordinating Council (WECC), and Regulatory Assistance Project (RAP) to inform and enhance air agency staff understanding of CPP issues that are important to other stakeholders such as Public Utility Commissions (PUC), Environmental Commission Boards, and electrical grid operators who are, or whose constituencies are, effected by the CPP.
- WESTAR staff continues to serve as members on the National Training Strategy Committee. The NTS Committee established the following goals: to understand the priority training needs of air quality agency professionals; to provide training opportunities that meet the priority needs of air quality agency professionals; to utilize course materials that are up-to-date, accurate, complete, and easy to use; to conduct all training using recognized subject matter experts and effective teachers; and to deliver effective and cost-efficient training through the use of existing, new and emerging technologies where appropriate
- WESTAR staff also serve as members on various committee including AAPCA, and NACAA and EPA Joint Training Committee (JTC). The JTC developed a Training Strategy Action Plan which includes efforts in: course update priorities; prioritize and initiate a plan to develop training offerings to fill gaps, based on curriculum project; develop and implement a process to determine the highest priority training needs on an on-going basis; develop and implement a plan for further enhancement and on-going maintenance of APTI-Learn; and re-launch an improved Learning Management System (APTI-Learn).

c. Activity Summary: Regional Technical Support Project

The purpose of the Regional Technical Support project is to provide technical support to member agencies related to analysis of monitoring data, analysis and preparation of emissions

inventories, regional modeling analyses, and operation and maintenance of web databases – all for member agencies to use in their air quality management and planning activities.

1) Status of work plan activities – Regional Technical Support Project

<i>Expected Result for Project Period</i>	<i>Results/Outcomes</i>	
	<i>2016 Q1</i>	<i>Project Period Total</i>
15 Regional technical analysis/planning conference calls	4	22
12 Technical Steering Committee conference calls	3	13
6 Face-to-face WRAP Board meetings	0	2
30 Travel support provided to local agency and tribal WRAP Board members	0	8

2) Other Activities this Quarter – Regional Technical Support Project

- Staff continued the development of the WRAP Regional Technical Center through discussions with state and federal agencies.
- Staff continued to work with state and federal agencies, including regional EPA offices, to discuss and collect input on regional technical analysis needs in the western U.S.
- Dissemination of reports, data, and summary results were conducted via the [WRAP website](#)
- The WRAP Technical Steering Committee began formally meeting on a regular basis.
- The Technical Steering Committee developed a draft Annual WRAP Workplan through several revisions and reviewed the Workplan with the Board.

d. Budget Summary and Status

The following tables summarize the status of WESTAR's Core Grant budget, comparing cumulative grant awards since the inception of the current grant (September 1, 2014) through the end of the most recent quarter.

EPA Core Grant 2014-16
Cumulative Grant Awards by Project through 3/31/2016

Project Title	Total Anticipated Project Period Cost	Total Awards Project Period to Date as of 3/31/2016¹	Percentage
Operations	840,000	549,868	65%
Training	1,102,500	732,555	66%
WRAP Support	457,452	303,954	66%
State Travel Support	361,548	215,304	60%
Totals	2,761,500	1,801,681	65%

¹ Rescission imposed in 2015Q4 reduced the total awards to-date by \$3,459

EPA Core Grant 2014-16
Expenses by Object Class through 3/31/2016

Object Class	Budget	This Quarter	Cumulative Expenses	Percentage
1. Personnel	657,106	52,835	303,319	46%
2. Fringe Benefits	178,098	12,318	68,868	39%
3. Travel	731,738	37,624	152,330	21%
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	105,000	0	0	0%
7. Construction	0	0	0	
8. Other	338,488	25,007	205,985	61%
9. Indirect Expenses	751,070	65,957	374,126	50%
Totals	2,761,500	193,741	1,104,629	40%

2. NPS COOPERATIVE AGREEMENT

Under this agreement, WESTAR/WRAP has agreed to cooperate with the National Park Service in furthering the understanding of air quality formation, transport and effects in the western U.S., which includes but is not limited to ambient monitoring and data reporting, creation and operation of databases, development of emission inventories, performance of air quality modeling to understand the effects of pollution and to facilitate discussion of possible mitigation, and the development of outreach and education products toward bettering the understanding of Western air quality by the public and stakeholders.

Projects and activities under this Agreement will be individually authorized by separate task agreements, with each project or activity having a separate work plan and budget developed cooperatively between the NPS and WESTAR/WRAP.

TASK 1: 3-State Study Coordination and Data Warehouse (P14AC00133)

This Task was completed on 9/30/2014.

TASK 2: Three State Air Quality Study (P14AC01122)

a. Activity Summary

Under this Task Agreement, WESTAR/WRAP provides collaboration and coordination services for states, tribes, local air agencies, and federal agencies across the Western U.S. under the leadership of the 3-State/Federal Leadership Forum (3-State/FLF). The 3-State/FLF is implementing the Western AQ Study with the following objectives:

- Provide storage and access to consistent, sufficient, comparable and high-quality technical data.
- Provide consistent protocols for technical data and its analysis for air quality impacts to be performed by the Three-State Study/FLF partner agencies.
- Initiate and support collaborative work by the federal and state partners on National Environmental Policy Act (NEPA) air quality analyses relative to energy development and for a broad range of air quality planning activities, including emissions, meteorological and air quality modeling.
- Develop technical capacity and improved data sets for the cooperating agencies using standardized reproducible data collection, quality assessment, analysis and storage protocols.
- Identify, document and apply criteria for base year and future year projections.
- Assist NPS and the Intermountain West Data Warehouse – Western Air Quality Study Governing Board in identifying ways and means of ongoing funding to support the data warehouse when operational
- Identify the mechanisms to be used by the technical work groups to report to the Oversight Committee and Governing Board for the Intermountain West Data Warehouse – Western Air Quality Study.

WESTAR/WRAP staff, serving as project coordinator for the Intermountain West Data Warehouse - Western Air Quality Study (IWDW-WAQS) conducted the following activities related to the furtherance of these objectives over the reporting period:

Activities related to study coordination:

- Provided staff support to working groups related to development of IWDW-WAQS ongoing operations protocols and public outreach materials.
- Organized and executed 15 conference calls for IWDW-WAQS technical activities.
- Organized and executed the January 12th IWDW-WAQS Technical Committee meeting.

- Assisted with organization, provided staff support for, and attended the March 8th Oversight Committee meeting.
- Participated in calls with EPA Region 8 and NPS staff for transition from NPS to EPA as the “lead agency” for the IWDW. The lead agency manages the meetings of the Governing Board and Oversight Committee and provides general project coordination on behalf of the Cooperating Agencies. Separately, the NPS will continue to provide technical direction and funding to WESTAR/WRAP.

Activities related to coordinating the efforts of the NPS, 3-State Study partners, and the Data Warehouse technical contractor team to design, assemble, test, populate, and plan further development of the Warehouse:

- Transfer protocols for modeling data and inputs to external users were updated and file transfers to outside users continued in the 1st quarter 2015.
- Daily work continued on the construction and implementation of the data, web database, visualization tools, associated metadata, and web pages to access and use the Data Warehouse.

Activities related to organizing and attending meetings, webinars, and calls for the 3-State Study:

- More than a dozen conference calls were held this quarter to manage the work of the technical support contractor team including Colorado State University (CSU)-Cooperative Institute for Research in the Atmosphere (CIRA), the University of North Carolina (UNC), and ENVIRON International Corp.

Summary of Work Plan Activities

<i>Expected Results for Project Period</i>	<i>Results/Outcomes</i>	
	<i>2016 Q1</i>	<i>Project-to-date</i>
6 Conference calls or meetings with Governing Board or Steering Committee	1	7
5 Face-to-face meetings	1	9
4 Technical milestones requiring special communication effort	2	18

Activities related to air quality modeling for the Study region:

- Regional modeling study analysis for the 2011 version B modeling platform was completed and scheduled for release in April 2016.
- Work on tasks under the Oct. 2014 through June 2016 Scope of Work continued for ENVIRON and UNC.
- An IWDW-WAQS working group to steward the ongoing data transfer process was continued, with monthly calls.

- An IWDW-WAQS working group on Model Performance Evaluation was continued to document both needed ongoing evaluation activities and standards for selecting contracted modeling support.
- An IWDW-WAQS outreach group comprised of cooperator agency representatives met to develop materials to assist in seeking outside funding.

b. Budget Summary and Status

**NPS Cooperative Agreement
Task 2 – Three State Air Quality Study # P14AC01122-TA
Expenses by Object Class through 3/31/2016**

Object Class	Budget	Cumulative		
		This Quarter	Expenses	Percentage
1. Personnel	75,493	9,395	69,066	91%
2. Fringe Benefits	16,553	1,598	11,771	71%
3. Travel	2,192	93	6,347	290%
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	778,186	0	778,186	100%
7. Construction	0	0	0	
8. Other	3,456	146	3,734	108%
9. Indirect Expenses	75,493	11,151	81,461	108%
Totals	951,373	22,383	950,565	100%

¹ WESTAR has drawn the approved contractual amount as an advance. A summary of contract expenses follows.

Project Contractor	Advance		Cumulative	
	Received	This Quarter	Expenses	Balance
Environ	705,186	74,473	554,090	151,096
St of Utah	73,000	0	73,000	0

TASK 3: Intermountain West Data Warehouse – Western Air Quality Study (IWDW-WAQS) (P14AC01122)

Under this Task Agreement, WESTAR/WRAP provides collaboration and coordination services for states, tribes, local air agencies, and federal agencies across the Western U.S. under the leadership of the agencies sponsoring the IWDW-WAQS for the federal and state agencies cooperating through the IWDW memorandum of understanding. The IWDW project builds upon and expands the Three-State Data Warehouse supported in Task 2. The IWDW and associated Western Air Quality Study (WAQS) modeling effort have the following shared objectives:

- Provide storage and access to consistent, sufficient, comparable and high-quality technical data.
- Provide consistent protocols for technical data and its analysis for air quality impacts to be performed by the IWDW-WAQS partner agencies.
- Initiate and support collaborative work by the federal and state partners on National Environmental Policy Act (NEPA) air quality analyses relative to energy development and for a broad range of air quality planning activities, including emissions, meteorological and air quality modeling.
- Develop technical capacity and improved data sets for the cooperating agencies using standardized reproducible data collection, quality assessment, analysis and storage protocols.
- Identify, document and apply criteria for base year and future year projections.
- Assist NPS and the IWDW-WAQS Governing Board in identifying ways and means of ongoing funding to support the data warehouse when operational
- Identify the mechanisms to be used by the technical work groups to report to the Oversight Committee and Governing Board for the IWDW-WAQS.

WESTAR/WRAP staff serve as project coordinator for the IWDW-WAQS.

a. Activity Summary

Other than small travel expenses, work under this Task Agreement will begin at the completion of Task 2. Use of Task 3 funds to coordinate the IWDW-WAQS project will begin in the 2nd quarter 2016

a. Budget Summary and Status

**NPS Cooperative Agreement
Task 3 – Three State Air Quality Study # P15AC01632
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative Expenses	Percentage
1. Personnel	8,070	0	0	0%
2. Fringe Benefits	1,769	0	0	0%
3. Travel	4,002	0	735	18%
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	482,381	0	0	0%
7. Construction	0	0	0	
8. Other	0	0	0	
9. Indirect Expenses	9,279	0	0	0%

Totals	505,501	0	735	0%
---------------	----------------	----------	------------	-----------

3. BLM/JFSP COOPERATIVE AGREEMENT (PMDetail)

Under this cooperative agreement, WESTAR, through WRAP, is charged with delivering innovative and useful technical products in the form of a quantitative assessment of prescribed and other fire types' effect on likely PM standards, both 24-hour and annual average for each of three historic years and 2008 alternate future scenarios. This assessment will rank fire contributions by locations. The planned PM exceedance vulnerability matrix will enable federal land management agencies to evaluate future real-world decisions about prescribed burning effects on air quality.

a. Administrative Status

The budget and work plan for this project was submitted to the Joint Fire Sciences Program (JFSP) and the Idaho State Office of the Bureau of Land Management as the grant award entity in November and December 2013. The grant monies were then awarded in February and March 2014, in two increments. Contracts with the four technical support organizations (Air Sciences, Inc.; ENVIRON; Colorado State University; and Carnegie-Mellon University) were executed shortly after the award.

b. Activity Summary

In December 2015, WESTAR made a request to JFSP to extend the end date of the project and grant to allow completion of the filter sample analyses and align with an extension in the IWDW-WAQS modeling schedule reported in the WESTAR Quarterly Report for the 3rd quarter 2015 under the NPS Cooperative Agreement. The modeling work for PMDetail is leveraged with the IWDW-WAQS. An updated summary of the deliverables and schedule to complete the PMDetail project resulting from the extension request is shown below.

Deliverable: Periodic updates to the [WRAPTools PMDetail project website](#), including data and analysis results for 2002, 2008, 2011, and future episodes.

Delivery Dates: 2002 results completed June 2014. 2008 modeling results completed December 2014. Updated emission inventories / filter selection / animations for 2008 completed Summer 2015. 2011 and future episodes will be completed in Spring 2016.

Deliverable: Online tools, including regulatory analysis/assessment results with case studies

Delivery Dates: Analysis of 2008 modeling and filter analysis results for case studies completed May 2015. Analysis of 2011 filter analysis results, 2011 filter analysis and modeling for case studies, and completion of online tools will be completed in Spring 2016.

Deliverable: Training will be webinar-style FLM user training for the online PMDETAIL tools

Delivery Dates: Spring 2016 – proposed date(s) to be identified at August 2015 project team meeting.

Deliverable: Submit Final Report to JFSP and summary of methodology and findings of PMDETAIL to refereed publication

Delivery Dates: Summer 2016

Progress and results of the PMDETAIL study, including the fire emissions inventory capabilities of WRAP Tools were solicited and presented at the EPA Region 10-sponsored Smoke Management Meeting in Spokane, WA in March 2016. The PMDETAIL project team scheduled and was accepted to make a presentation ([Data and Tools for Analysis of Smoke Impacts on Ozone and Particulate Matter](#)) at the International Association of Wildland Fire – Fuels and Fire Behavior meeting in mid-April 2016. The PMDETAIL project team was also solicited to provide and has prepared a syllabus for an 8-hour training on the PMDETAIL and DEASCO₃ studies' results, data, and tools as part of WRAP Tools, for analysis of fire impacts on PM, Ozone, Regional Haze, and Exceptional Events. This training will be conducted at the 2nd International Smoke Symposium in early November 2016.

c. Budget Summary and Status

WESTAR “inherited” the funds remaining in the PMDETAIL project originally awarded to WGA. WESTAR’s budget for this project is based on an updated Scope of Work reflecting the work completed under the WGA award and the work that remains to be completed under the WESTAR award.

**BLM/JFSP Cooperative Agreement
PMDETAIL Project #L14AC00008
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative	
			Expenses	Percentage
1. Personnel	14,449	0	14,019	97%
2. Fringe Benefits	2,041	0	2,322	114%
3. Travel	1,900	0	3,293	173%
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	400,039	16,176	361,728	90%
7. Construction	0	0	0	
8. Other	7,455	0	1,610	22%
9. Indirect Expenses	15,211	0	15,914	105%
Totals	441,095	16,176	398,886	90%

4. BLM AIR QUALITY MODELING WESTERN STATES PROJECT

Drill Rig NO₂ Monitoring Study

WESTAR received initial funding from the American Petroleum Institute (API) in late 2013 to organize a workgroup and develop a work plan and schedule to execute a Study to collect ambient measurements adjacent to drilling rigs to evaluate actual 1-hour NO₂ impacts from drilling operations. In addition, sufficient data would be collected regarding drilling operations that could be used to verify NO₂ air quality models. The Study will focus on short term episodes.

In May 2014, WESTAR/WRAP responded to a funding opportunity notice from the Bureau of Land Management (BLM) for this Study. A funding proposal was prepared and submitted by WESTAR/WRAP and was then awarded by the BLM as Task 1 under the BLM-WESTAR Cooperative Agreement. The BLM funding is allocated for travel and communications for WESTAR/WRAP staff to support the Study. The BLM funding is also allocated to pay the salary of a 50% full-time equivalent WESTAR contract employee. In August 2014, API transferred funding resources to WESTAR for the bulk of the Colorado field sampling contract. In December 2014, BLM provided additional grant funding to cover the remainder of the Colorado field sampling expenses, WESTAR/WRAP staff support, and a separate data formatting and analysis contracted effort. In November 2015, API provided additional funding resources for contractor analysis of the Alaska field sampling data.

a. Activity Summary

Activities this quarter included:

- The WESTAR/WRAP contract employee continued the evaluation of the Alaska and Colorado field sampling data and reports, and coordinated overall Study activities.
- The initial short-term, limited scope effort with AMEC Foster Wheeler to format and quality assure the data collected in the field, for use in future Model Evaluation activities was completed.
- AMEC Foster Wheeler prepared a report and addressed comments on the report, which further quality assures, processes, and formats Alaska field sampling data for subsequent model evaluation studies.
- The WESTAR/WRAP contract employee worked with Study Management Team to develop 4 volunteer project data analysis teams to study the Alaska data, and the Colorado data when those are further quality-assured, processed, and analyzed.
- The [Drill Rig 1-hour NO₂ Collaborative Monitoring Study](#) project webpage was updated.

The remaining documentation, analysis, and reporting for this phase of the Study will be completed in the initial portion of the 2nd quarter of 2016.

b. Budget Summary and Status

The BLM Task 1 funding and supplemental funding received in late 2014 enabled Phase 2 of the Study and provides staff support to the entire Study. Remaining Phase 1 funds have been applied to Phases 2 through 4, combined with additional resources that will be needed for these phases. The combination of funding for WESTAR personnel by BLM and the field sampling contract support from API is the combined funding for this project.

**BLM Air Quality Modeling Western States
Including Continuing Work on Drill Rig NO2 Monitoring Study
BLM Cooperative Agreement # L14AC00077
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative Expenses	Percentage
1. Personnel	16,800	0	22,818	136%
2. Fringe Benefits	6,222	0	3,721	60%
3. Travel	8,426	0	2,205	26%
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	188,244	6,860	179,774	96%
7. Construction	0	0	0	
8. Other	1,463	8	5,093	348%
9. Indirect Expenses	18,845	0	25,102	133%
Totals	240,000	6,868	238,713	99%

**BLM Air Quality Modeling Western States
Including Continuing Work on Drill Rig NO2 Monitoring Study
American Petroleum Institute (API) Funding
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative Expenses	Percentage
1. Personnel	3,444	0	3,444	100%
2. Fringe Benefits	469	0	469	100%
3. Travel	0	0	0	
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	266,759	9,082	261,549	98%
7. Construction	0	0	0	
8. Other	0	0	0	
9. Indirect Expenses	4,328	0	4,328	100%
Totals	275,000	9,082	269,790	98%

Oil and Gas Emissions Inventory Updates for the San Juan and Permian Basins

The BLM New Mexico State Office (NMSO) and the State of New Mexico Environmental Department (NMED) Air Quality Bureau need up-to-date and accurate oil and gas emission inventories in the near future to address the potential air quality and AQRV impacts associated with oil and gas development in the region. They need a comprehensive O&G emissions inventory that can be used for air quality modeling and planning. The objective of this project is to develop the input data that will be used to develop a detailed and comprehensive O&G emissions inventory for the 2014 baseline year and a projection 5-7 years in the future using the WRAP Phase III methodology and procedures. This work will allow the BLM to obtain more accurate air quality and AQRV impact assessments due to current and future O&G development activities in New Mexico.

a. Activity Summary

This project will focus on surveys of producers to update and gather data used to calculate emissions of the criteria pollutants (NO_x, CO, VOCs, PM and SO_x) and greenhouse gases (CO₂, CH₄, and N₂O). Ramboll-Environ is working for WESTAR/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), and the tribes in the San Juan Basin (Navajo, Ute Mountain Ute, Southern Ute, and Jicarilla Apache) 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 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 memoranda and spreadsheets for each basin will reside on the WRAP website.

Project Schedule for Greater San Juan O&G Emissions Inventory Project

- Begin Survey preparation, Ranked List of Companies, Query for State/Federal Agencies,

June 2015

Access IHS database at BLM, identify Contacts from Ranked List of Operators from Production Statistics, Contacts from Agencies

- Schedule and Hold Outreach Calls/Meetings
- Distribute Survey Instruments and Agency Queries September 2015
 - Hold additional outreach calls
- Agencies & Companies Complete/Submit Query Response November 2015
- Complete Draft and Final Memoranda/Spreadsheets July 2016

b. Other significant project activities

- A conference call meeting with tribes, states, O&G operators, federal agencies, and environmental interests in the greater San Juan Basin area was held October 14th to discuss progress on the project.
- In December 2015, the Southern Ute Indian Tribe – Air Quality Program contributed a detailed minor source inventory.
- Significant delays in survey responses due to the lack of staff at O&G operator companies were encountered.
- Two of the largest O&G operator companies were not able to complete surveys. As a result, alternative data collection and analysis methods had to be developed, and additional funding needs identified for the BLM study sponsors.
- The project end date has been extended to July 31, 2016 to allow time for supplementary BLM project funding and time to complete the additional work.

The project website was updated at: <http://www.wrapair2.org/SanJuanPermian.aspx>.

c. Budget Summary and Status

**BLM Oil and Gas Emissions Inventory Updates for the San Juan and Permian Basins
BLM Cooperative Agreement # L14AC00077
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative Expenses	Percentage
1. Personnel	6,190	0	7,518	121%
2. Fringe Benefits	1,780	0	1,326	75%
3. Travel	1,497	0	1,025	68%
4. Equipment		0	0	
5. Supplies		0	0	
6. Contractual	92,950	0	67,528	73%
7. Construction		0	0	
8. Other		0	0	

9. Indirect Expenses	7,583	0	8,685	115%
Totals	110,000	0	86,082	78%

5. NEW MEXICO DONA ANA COUNTY OZONE MODELING

A contract was awarded by the State of NM Air Quality Bureau to WESTAR for work to start by the end of September 2015 for a comprehensive ozone modeling study for the southern Dona Ana County, NM area. The State of NM is funding this work separately, aligned with and leveraged against similar work during the same time frame in 2015-16 under the IWDW-WAQS effort.

This work will collect and report detailed emissions inventory data, meteorological monitoring and modeling data and source apportionment to identify significant contributions to New Mexico's border areas ozone. Project results are available on the project website at: <http://www.wrapair2.org/SNMOS.aspx>.

a. Activity Summary

The work elements for this project include the following:

No.	Deliverable	Due Date
1	Work plan and PowerPoint presentation of Weather Research Forecast (WRF) Meteorological Modeling Application/Evaluation Report	Completed 11/30/15
2	PowerPoint presentation on Permian Basin oil and gas 2011 and future year emission update.	
3	PowerPoint presentation on Mexico emissions to be used in 2011 base and future year modeling.	
4	Technical memo for 2011 base year base case emissions modeling prepared with SMOKE.	Completed 2/29/16
5	PowerPoint presentation on results of natural emissions modeling.	
6	PowerPoint presentation on the base year air quality modeling.	
7	Base case modeling and model performance evaluation report.	4/30/16
8	PowerPoint presentations on future year emissions modeling.	4/30/16
9	PowerPoint presentation on future year air quality modeling.	5/31/16
10	PowerPoint presentation on future year ozone projections.	5/31/16
11	PowerPoint presentation on future year emissions sensitivity modeling.	8/15/16
12	PowerPoint presentation and interactive Excel spreadsheets on future year ozone source apportionment modeling.	9/15/16
13	Draft Technical Support Document (TSD), final TSD, and Response to Comments (RtC) document for NMED. Modeling data, RtC document, and final TSD also posted on WAQS data warehouse.	11/18/16

b. Budget summary and status

**New Mexico Dona Ana Modeling Project
NM P.O. #66700-0000025413
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative Expenses	Percentage
1. Personnel	5,000	1,195	2,642	53%
2. Fringe Benefits	1,000	203	456	46%
3. Travel	0	0	0	
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	202,500	0	43,000	21%
7. Construction	0	0	0	
8. Other	0	0	0	
9. Indirect Expenses	6,000	1,494	3,384	56%
Totals	214,500	2,892	49,482	23%

6. FIRE EMISSIONS TRACKING SYSTEM 2014 ACTIVITY DATA FOR EPA FIRE NEI

WESTAR-WRAP was awarded a sole-source contract by EPA OAQPS to collect, process, and format Fire Emissions Tracking System (FETS) data to augment the EPA 2014 Fire National Emissions Inventory development effort.

Work included the following tasks:

1. Conduct outreach to Smoke Management Programs at western state air agencies.
2. Screen and conduct quality assurance/control steps to investigate “unknown” event, supply information to users for feedback, and make necessary adjustments to data.
3. Export final data to EPA NEI.

The project work was completed in the January through March 2016 time frame.

**Fire Emissions Activity Data Project
EPA Contract – Purchase Requisition #PR-OAR-15-01728
Expenses by Object Class through 3/31/2016**

Object Class	Budget	This Quarter	Cumulative	
			Expenses	Percentage
1. Personnel	245	232	232	95%
2. Fringe Benefits	40	40	40	99%
3. Travel	0	0	0	
4. Equipment	0	0	0	
5. Supplies	0	0	0	
6. Contractual	6,440	0	0	0%
7. Construction	0	0	0	
8. Other	275	272	272	99%
9. Indirect Expenses	0	0	0	
Totals	7,000	544	544	8%

7. OTHER SIGNIFICANT ACTIVITIES

- Mary Uhl became WESTAR's Executive Director on February 2, 2016. Jackie Gadret was hired as WESTAR's office manager on January 19, 2016.

8. CONSOLIDATED EXPENSE SUMMARY

Cumulative Expenses by Object Class and Funding Source through 3/31/2016 All Active Accounts

	EPA	EPA Fire NEI	NPS	NPS	NM	BLM/JFSP	BLM	BLM	
Object Class	Core Grant 2014-16	FETS 2014	Task 2 3-State	Task 3 3-State	Dona Ana Modeling	PMDETAIL	Air Quality Modeling	NM Oil & Gas EI	Totals
1. Personnel	303,319	232	69,066	0	2,642	14,019	22,818	7,518	419,614
2. Fringe	68,868	40	11,771	0	456	2,322	3,721	1,326	88,504
3. Travel	152,330	0	6,347	735	0	3,293	2,205	1,025	165,935
4. Equipment	0	0	0	0	0	0	0	0	0
5. Supplies	0	0	0	0	0	0	0	0	0
6. Contractual	0	0	778,186	0	43,000	361,728	179,774	67,528	1,430,217
7. Construction	0	0	0	0	0	0	0	0	0
8. Other	205,985	272	3,734	0	0	1,610	5,093	0	216,693
9. Indirect	374,126	0	81,461	0	3,384	15,914	25,102	8,685	508,672
Cumulative Expenses	1,104,629	544	950,565	735	49,482	398,886	238,713	86,082	2,829,635
Budget	2,761,500	7,000	951,373	505,501	214,500	441,095	240,000	110,000	5,230,969
Balance Avail	1,656,871	6,456	808	504,766	165,018	42,209	1,287	23,918	2,401,334

¹ Cumulative total of \$627,090 drawn from advance for contractor expenses; advance balance = \$151,096

**Current Quarter Expenses by Object Class and Funding Source – All Active Accounts
January 1, 2016 – March 31, 2016**

	EPA	EPA Fire NEI	NPS	NPS	NM	BLM/JFSP	BLM	BLM	
Object Class	Core Grant 2014-2017	FETS 2014	Task 2 3-State	Task 3 3-State	Dona Ana Modeling	PMDETAIL	Air Quality Modeling	NM Oil & Gas EI	Totals
1. Personnel	52,835	232	9,395	0	1,195	0	0	0	63,657
2. Fringe Benefits	12,318	40	1,598	0	203	0	0	0	14,160
3. Travel	37,624	0	93	0	0	0	0	0	37,717
4. Equipment	0	0	0	0	0	0	0	0	0
5. Supplies	0	0	0	0	0	0	0	0	0
6. Contractual	0	0	0	0	0	16,176	6,860	0	23,036
7. Construction	0	0	0	0	0	0	0	0	0
8. Other	25,007	272	146	0	0	0	8	0	25,432
9. Indirect	65,957	0	11,151	0	1,494	0	0	0	78,602
Total Expenses	193,741	544	22,383	0	2,892	16,176	6,868	0	242,604

¹ \$74,473 drawn from advance for contractor expenses during this reporting period