



United States  
Department of  
Agriculture

Forest  
Service

Pacific Northwest  
Research Station

Pacific Wildland Fire Sciences  
Laboratory  
400 N. 34<sup>th</sup>, Suite 201  
Seattle, Washington 98103  
Phone (206) 732-7800  
FAX (206) 732-7801

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Dr. Jonathon Guzzo  
Washington State Department of Natural Resources  
Olympia, WA

Dear Jonathan,

I am pleased to provide a report for the Washington State Resiliency Pilot project entitled: “Smoke and Air Quality Monitoring Data Report in Support of the Washington State Department of Natural Resources 2016/2017 Forest Resiliency Burning Pilot Project”. This report fulfills the agreement between the US Forest Service AirFire Team and the Forest Resiliency Burn Pilot project.

In the fall of 2016, we deployed 8 temporary air quality monitors (Met One Inc. EBAMS and E-Samplers). In the spring of 2017 we re-deployed 5 of the temporary air quality monitors. These temporary monitors, combined with the temporary monitor that the Washington State Department of Ecology deployed in Naches (fall 2016), and the network of permanent air quality monitors, resulted in a large dataset of 1-hr average PM<sub>2.5</sub> concentrations. We have compiled and QA/QC'd the data and the attached report presents the data and an analysis of the air quality conditions at 13 monitoring sites.

There are several key findings from the study:

- 1) There were 16 days with air quality in the moderate category. Thirteen of those days were due to non-pilot burns and three days due to pilot burns.
- 2) There were 2 days with air quality in the unhealthy for sensitive groups category, both due to non-pilot burns.
- 3) Overall, for the cases analyzed here, there was not an appreciable difference between the standard day-of approval burns and the 24-hr approval burns. However, we do recommend that additional cases/seasons be analyzed.

The AirFire scientists, technicians, and contractors wish to thank the Washington State Department of Natural Resources for the funding and opportunity to work on this valuable research effort.

If you have any questions please do not hesitate to contact me.

Sincerely,

*Susan M. O'Neill*

SUSAN M. O'NEILL  
Air Quality Scientist