

GA EPD Participates in a Prescribed Fire Demonstration in Pike County

Di Tian



From left to right: Henian Zhang, DeAnna Oser, Daniel Ross, Di Tian, Ken Park (GFC), Lynsey Scarbrough, Janet Aldredge, Tao Zeng, and Jim Boylan

On February 29th, 2016, eight Air Protection Branch Staff attended the prescribed fire demonstration near the Georgia Forestry Commission (GFC) local office in Pike County. Also attending were researchers from Georgia Institute of Technology and Emory University. GFC's meteorologist Daniel Chan and Prescribed Burn Manager Ken Park discussed Georgia's prescribed fire history and GFC burning permit requirements to protect public safety and health. They demonstrated how a burning permit is issued and conducted a prescribed fire on a privately-owned plantation.

In Georgia, more than one million acres of forest land are burned every year. These prescribed fires can emit large amounts of air pollutants such as particulate matter, nitrogen oxides, volatile organic compounds, and carbon monoxide. Emissions vary with both meteorological and fuel conditions as well as firing techniques. These factors also determine whether a prescribed fire is successfully conducted i.e. the understory fuels are effectively consumed with minimal smoke production. This is the same goal that both Georgia EPD and GFC desire. Over the years, Georgia EPD has closely collaborated with GFC through implementing a Smoke Management Plan and burning bans during ozone season to minimize the adverse air quality impacts from these fires. Also, GFC provides EPD with copies of permit records for these fires. The Data and Modeling Unit



(DMU) in the Planning and Support Program develops emission inventories for these fires using GFC permit records, and quantifies the air quality impacts using photochemical models. Including field knowledge that the forest managers learned during this demonstration will allow DMU to further improve the fire inventories. Also, better understanding of prescribed fires helps the Data Analysis Unit in the Ambient Monitoring Program prepare "exceptional event" demonstrations that correlate the causal effect of prescribed fires to exceedances of the NAAQS at monitoring sites. The close collaboration between GFC and EPD is crucial, allowing prescribed fires to maximize the ecosystem health benefits while minimizing adverse air quality impacts.