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Getting in the **Zone**

With summertime ozone alerts a distant memory and winter weather upon us, one Oklahoma State University-Tulsa student's research on the ozone is heating up.

David Williams, a civil engineering doctoral student at OSU-Tulsa, has been collecting data on Tulsa's ozone since May. Now Williams will begin to analyze that data and study the effects of the ozone on Tulsa's air quality. Williams was awarded a fellowship of \$37,000 by the Environmental Protection Agency (EPA) to complete the study.

"OSU is committed to research efforts that will make beneficial impacts in our community and nationally," said OSU-Tulsa President Gary Trennepohl. "David Williams' research is a great example of combining rigorous academic research with practical application to real-world issues."

The EPA's Greater Research Opportunities (GRO) Graduate Fellowship Program will fund Williams' research for a period of three years. The GRO program sponsors master's and doctoral level students in environmentally related fields of study. More than 1,300 applicants compete each year for approximately 100 fellowships through a rigorous merit review process.

Williams said he is honored to receive a prestigious fellowship for his research that could benefit state and national environmental agencies.

"When choosing a Ph.D. project, I wanted to focus on an issue that was relevant to the local area," Williams said. "I think it is important for state universities to research topics that affect the local population."

Williams said the purpose of his research is to get a measurement of how much ozone is locally produced during an entire ozone season, which typically begins in May and ends in October.

"In this project, I'll be trying to determine if the ozone is solely locally generated or if transported ozone is significantly affecting the air quality in Tulsa," Williams said. "Tulsa's amount of ground-level ozone is one of the pollutants that determine the EPA's designation of our city."

According to the EPA, a city or area may be designated as "attainment" or "nonattainment" based on the number of violations of the national 8-hour ozone standard over a three-year period.

"The outcome of this research could ultimately impact Tulsa's status on attainment," Williams said. "It could certainly assist the Oklahoma Department of Environmental Quality (ODEQ) when it considers and implements strategies on tackling ozone problems."

ODEQ donated two analyzing instruments to OSU for the purpose of this study. Williams said the units, which are the

same instruments used to measure data to determine "ozone alerts," were placed on the roof of the Bank of Oklahoma Tower in downtown Tulsa in May to collect data. The City of Tulsa provided the space and power for the instrumentation.

Williams also launched an ozone analyzer-equipped research balloon, known as an "ozonesonde," for additional data collection. He plans to present his research at the EPA's national conference in September 2006.

"While at OSU-Tulsa, I've had the opportunity to study with world-class faculty," Williams said. "I'm excited about applying that knowledge as emphasis continues to be placed on protection of the environment."

Trish McBeath

Photo / Gary Hamilton



OSU-Tulsa researcher David Williams checks ozone analyzing instruments atop the BOK Tower in downtown Tulsa.