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NEWS RELEASE

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DEQ & Universities Collaborate on GSL Ozone Study

SALT LAKE CITY – The Utah Department of Environmental Quality’s (DEQ) air quality scientists and researchers from Utah universities are deploying sensors this summer near the Great Salt Lake to detect smog-forming ozone as part of a study funded by the 2014 Legislature.

Students and staff at the University of Utah, Utah State University, and Weber State University are working under the direction of Seth Arens, a scientist with DEQ’s Division of Air Quality (DAQ) to determine the Great Salt Lake’s impact on ozone.

Scientists expect to begin collecting data between June 16 and 18 at several locations around the Wasatch Front, near the Great Salt Lake.

“This work will help DAQ’s efforts to understand the causes of high ozone concentrations and predict summertime episodes of poor air quality along the Wasatch Front,” Arens said. It’s a timely study considering the federal Environmental Protection Agency is expected to unveil new tighter ozone standard later this year, he added.

Breathing ozone can trigger a wide range of health problems, particularly for children, the elderly, and those susceptible to asthma. Current DAQ 3-day ozone health and action forecasts are available at <http://air.utah.gov/forecast.php?id=slc>

University of Utah Professor John Horel suspects the Great Salt Lake contributes to ozone combined with other factors. “The Lake helps modulate the wind patterns in the surrounding areas, driving pollutants from urban areas towards the lake at night. These emissions from cars, homes, and industry are the building blocks for ozone. Then, the energy from the sun helps create ozone during the day from those emissions. In the afternoon, lake breezes may carry ozone back towards the Wasatch Front,” he said.

Assistant Research Professor Erik Crosman of University of Utah hopes the research will determine whether the drop in the lakebed is contributing to higher ozone levels. “The exposed dry beds surrounding the Lake are highly reflective and that provides more energy for photochemical reactions creating ozone to take place,” he said.

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The 2015 summer research project has been coined “SO₃S” by the research team, for the Summer Ozone Study (O₃ is the chemical symbol for ozone).

“Many more ozone sensors near the ground have been deployed around the Great Salt Lake by DAQ than we normally have available” said Arens. “The universities provide specialized ways to deploy ozone sensors, for example, on a UTA TRAX light rail car and vehicles, including a small van referred to by the University of Utah as the ‘Nerdmobile’ that contains a suite of air pollution sensors.



Researchers from Utah State University and Weber State University will be assessing how the ozone concentration changes in the lowest few hundred meters away from the surface. They will be using ozone sensors mounted on Unmanned Aerial Vehicles as well as tethered and free-flying balloons.”

Anyone interested in the project can see some of the preliminary data as we’re collecting it by following this web site: <http://meso2.chpc.utah.edu/gslso3s/> . Students and researchers involved in the project will be analyzing the unprecedented amount of ozone and weather data collected as the project unfolds and then continuing in the fall.

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First Intensive Observing Period is tentatively scheduled for the period June 16-18. University researchers will be collecting data at several different locations along the Wasatch Front and near the Great Salt Lake. Contact John Horel if interested on where and when scientists are likely to be.

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About DEQ

Established in 1991, the Utah Department of Environmental Quality's (DEQ) mission is to safeguard public health and quality of life by protecting and enhancing the environment. DEQ implements state and federal environmental laws and works with individuals, community groups and businesses to protect the quality of Utah's air, land and water. For more information, visit www.deq.utah.gov, follow DEQ on Facebook ([utahdeq](https://www.facebook.com/utahdeq)) and Twitter ([UtahDEQ](https://twitter.com/UtahDEQ)), or call 1-800-458-0145.