



January 19, 2023

Bingham Research Center Utah State University

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Uintah Basin Air Quality Research Project: Funding Renewal Request

About Uintah Basin Air Quality:

- The Uintah Basin experiences wintertime inversions and impaired air quality like other areas of Utah, but unique pollution sources, including the oil and gas industry, lead to a unique pollution problem—elevated ozone during some winter seasons.
- The Basin is currently an Environmental Protection Agency (EPA) nonattainment area for ozone. Ozone impacts public health, and air quality regulations threaten oil and gas development, the Basin's economic lifeblood and a key revenue source for Utah.

What is the Uintah Basin Air Quality Research Project?

- [SB118](#) established the project during the 2016 legislative session. It provides \$250,000 annually (with a 7-year sunset) for USU's Bingham Research Center to carry out research that industry and government can use to understand and resolve air quality problems in the Uintah Basin.
- Funding comes entirely from the [Infrastructure and Economic Diversification Investment Account, UT Code § 51-9-303 \(2016\)](#). The account consists of oil and gas severance tax revenue, Legislative appropriations, and private foundation grants. It is set aside for infrastructure, economic diversification, and research projects that benefit the parts of the state that produce severance tax revenues. It accrues more than \$1 million annually and has been used primarily for this project.

What Has the Project Accomplished?

- Development of a program to forecast ozone and alert the oil and gas industry when poor air quality is expected, allowing them to reduce emissions when it matters most.
- Use of our research by the Utah Petroleum Association and its members in their Latch the Hatch campaign, which encourages industry to reduce pollution from well pad equipment we showed to be a frequent emission source.
- Decline in days with ozone higher than the EPA standard by nearly four days per year over the course of the project, potentially avoiding many millions of dollars in additional compliance costs.
- Thousands of pages of reports and publications, hundreds of presentations, and dozens of datasets.

What is Requested?

- We request a removal of the funding's sunset provision, renewal of the \$250,000 ongoing funding, and an additional \$150,000 in ongoing funding to total \$400,000 in ongoing funding.
- Our laboratory and field equipment is aging, resulting in reduced research output. Also, current staffing levels are inadequate to carry out research requested by stakeholders. Additional funding will be used to hire an additional staff scientist, replace aging equipment, and hire local students.

Supporters

UT Petroleum Assoc.; UT Clean Air Partnership; Seven County Infrastructure Coalition; Uintah County Commission; Duchesne County Commission; UT Assoc. of Counties; UT Rural Electric Cooperative Assoc. (URECA)/ Moon Lake Electric Association.



Uinta Basin Air Quality Research: Major Accomplishments

The Bingham Research Center was established in 2010 and has worked to understand and help stakeholders reduce Uinta Basin winter ozone since that time. The following are some highlights of the Center's accomplishments.

Decline in Winter Ozone

- Days with winter ozone exceeding the EPA standard have declined since 2013 by nearly four per year. Statistical analyses show that the decline is due to a decrease in ozone-forming pollutant emissions rather than changes in meteorology. The problem has decreased enough that the Uinta Basin will likely be declared in attainment of the EPA ozone standard next year.
- Efforts by industry and regulators have resulted in decreased pollutant emissions from the oil and gas industry, which has, in turn, led to the decrease in winter ozone. Research and outreach by the Bingham Center have been essential to these efforts.
- As oil and gas drilling and production increase again in the Uinta Basin, work is still needed to ensure winter air quality continues to attain the EPA standard.

Research with Impact

- Bingham Center scientists showed that some summertime ozone episodes were due to natural phenomena and that wintertime ozone is declining. These findings have helped keep the Basin from a more stringent and costly regulatory designation.
- Research at the Bingham Center has quantified emissions from a wide variety of oil and gas source types, giving regulatory agencies and oil and gas companies a more complete understanding of where emissions come from and how to reduce them.
- Improvements to air quality models at the Bingham Center have allowed regulatory agencies to predict the impacts of emissions changes with greater accuracy, ensuring that regulatory decisions are effective and efficient.
- The Bingham Center serves as a repository of expertise related to winter ozone, routinely meeting with stakeholders, giving presentations, and sharing datasets.

Working with Industry to Reduce Emissions

- The Bingham Center operates a program to forecast winter air quality and issue email alerts when high ozone is likely. The program's purpose is to provide oil and gas companies with information that allows them to reduce emissions when it matters most. All major oil and gas-producing companies in the Uinta Basin participate in the program.
- Research at the Bingham Center has shown that oilfield liquid storage tanks are important pollutant sources and that most emissions from those tanks are preventable. The Utah Petroleum Association and its members created a program based on these findings called Latch the Hatch. The program encourages companies to take specific actions to reduce tank emissions.
- The Bingham Center facilitates the Uinta Basin Ozone Working Group, which has participants from oil and gas companies, mining companies, the Ute Indian Tribe, government agencies, elected officials, and environmental interests. The Group meets regularly to discuss new research, regulatory developments, and actions that can be taken to reduce winter ozone.