

# Air Pollution in Salt Lake City

## FACTSHEET



Healthy air. Healthy climate.

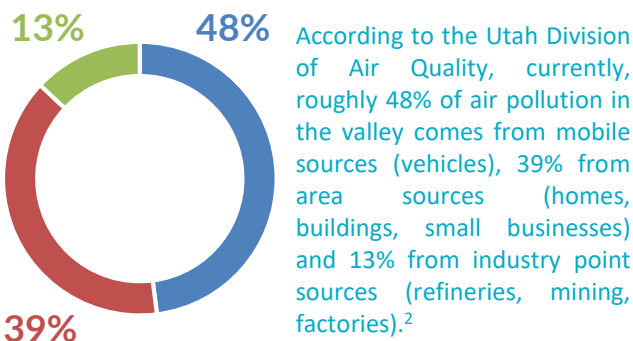
## The Problem

Utah evokes images of beautiful landscapes, top ski resorts and the Great Salt Lake. However, it is also becoming known for its polluted air, with Salt Lake City and surrounding areas having some of the worst air quality in the United States in winter.

While geography plays a significant role in trapping smog in the valley, action is needed to reduce the harmful emissions that make up the smog that the community breathes.

In 2014, Utah was in the [top five states](#) for the high carbon intensity of energy supply, where the use of coal is a major contributor to air pollution.<sup>1</sup> Coal-burning power plants are also a major source of the carbon pollution that is causing climate change.

Climate change is resulting in the warmer temperatures, which is exacerbating the drying out of the Great Salt Lake and causing more and larger severe dust storms.



Proposed water diversion projects could divert 20% of the Bear River's water which is the largest tributary to the GSL, further worsening exposures to dust from the exposed lakebed that contains toxics from years of mining waste and agricultural chemicals.

Dust from gravel pit and mining operations is yet one more source of toxic particulate matter exposure in the area. Studies show that exposure to dust and diesel exhaust from these operations causes higher rates of cancer, infectious diseases, respiratory and heart disease and reproductive pathologies. Even short-term inhalation of the type of particles typical of gravel pit dust are associated with increased hospitalizations for heart disease.

The EPA has proposed to reclassify Utah's non-attainment areas (areas that do not meet -- or "attain" EPA air quality standards, which include Salt Lake County) from "moderate" to "serious" for not meeting fine particulate matter standards. The levels of air pollution found in the area called the "Wasatch Front" increases the rates of heart attacks, stroke and sudden death.

Utah's air pollution sources also contribute to global warming., Utah was in the [top five states in 2014](#) for the high carbon intensity of its energy supply, where coal is a "dominant emissions source."<sup>3</sup> Several towns rely on the boom and bust cycle of the fossil fuel industry.



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## Air Quality Monitoring

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**Community Monitoring:** A non-profit called Purpleair.org provides less expensive outdoor and indoor home air quality monitors that give the community real-time data. The PurpleAir network is beginning to grow. The various universities in the area are also engaging in their own air monitoring studies, using different systems.

**Official Monitoring:** The Utah Division of Air Quality has air quality monitors set up in the valley, however approximately a third of them are obsolete. The legislature passed appropriations to fund the replacement of these air monitors and to add one more, but more monitors are needed. Added formal monitoring should be done particularly in sites where there are refinery, mining and gravel pit operations.

The Salt Lake Metropolitan Area with a population of 2.5 million is part of the non-attainment areas being classified by the EPA as “serious” for not meeting the standards for fine particulate matter. Utah needs to propose a new State Implementation Plan to meet these standards by 2019. This is a critical process and milestone that needs to be reached for the health of the community. It is important for the state to have a strong implementation plan.



## The Solution

There are sources for particulates that we hope to see addressed:

**1) Vehicle Emissions.** Reducing mobile pollution by implementing diesel emission testing especially in counties that fall under the non-attainment area and have existing vehicle emissions testing programs. The World Health Organization classifies diesel engine exhaust as “carcinogenic to humans.”<sup>4</sup> PM 0.1 called “ultra fine PM” is the most toxic subset of PM2.5. Nationwide, over 50% of PM 2.5 comes from diesel exhaust, and even more than 50% of PM 0.1 comes from diesel exhaust.<sup>5</sup> Traffic with high levels of diesel exhaust is associated with increased risk of a heart attack within 1 hour of exposure.<sup>6</sup>

**2) Dust from the exposed lakebed of the Great Salt Lake.** The Bear River Development Project will divert significant amounts of water from entering the Great Salt Lake (GSL), causing dry beaches surrounding the lake to expand. Sand tainted by over a hundred years’ worth of mining waste containing heavy metals such as mercury, and by decades of toxic agricultural chemicals and pesticides will make an already serious dust storm problem worse when these contaminants are blown over valley. By far, the highest levels of particulate pollution ever recorded have been during dust storms.<sup>7</sup>

**3) Toxic dust from various mining and gravel pit operations across the valley.** Studies show that exposure to dust and diesel exhaust from these operations causes higher rates of cancer, infectious diseases, respiratory and heart disease and reproductive pathologies.

Even short-term inhalation of the type of particles typical of gravel pit dust are associated with increased hospitalizations for heart disease. The dust can also contain silica, which is a carcinogen that has exposure standards for workers but not for communities in the affected areas.

Through the Unmask My City campaign, Utah Physicians for a Healthy Environment and our partners hope to share information with health providers and the community on these risks. By educating the public on the dangers of more exposed toxic dust from the Great Salt Lake, particularly with warmer temperatures and water diversion, we hope to see a growing push to discontinue efforts to divert the water that feeds the GSL.

### • Action

We are asking Utah leaders and lawmakers to prioritize the health of the community and take a long-term view, by preparing a strong state implementation plan to meet federal air quality standards. In particular, we hope that they take these specific actions of supporting diesel emissions testing, preventing any water diversion projects that would affect the inflow of water to the Great Salt Lake, and better monitoring and regulation of the toxic dust that spreads across the valley from the dry lakebed, gravel pits and mining operations:

[www.unmaskmycity.org/salt-lake-city](http://www.unmaskmycity.org/salt-lake-city)



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#UnmaskMyCity

Unmask My City is a global initiative by doctors, nurses, public health practitioners, and allied healthcare professionals dedicated to improving air quality and reducing emissions in our cities.

This will save millions of lives, improve health outcomes for billions of people, and make a huge contribution to greenhouse gas reductions needed to keep the world safe from climate change crises.



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