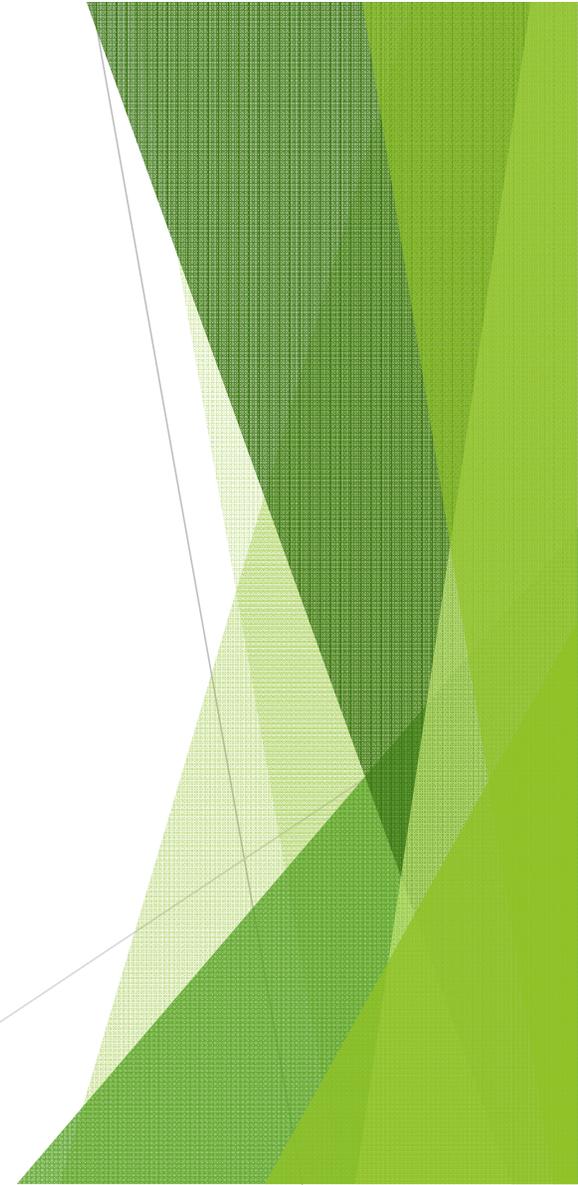




Mining In High Wind Areas

A Toxic Business

Point of the Mountain



MesoWest's FPS (flight park south)

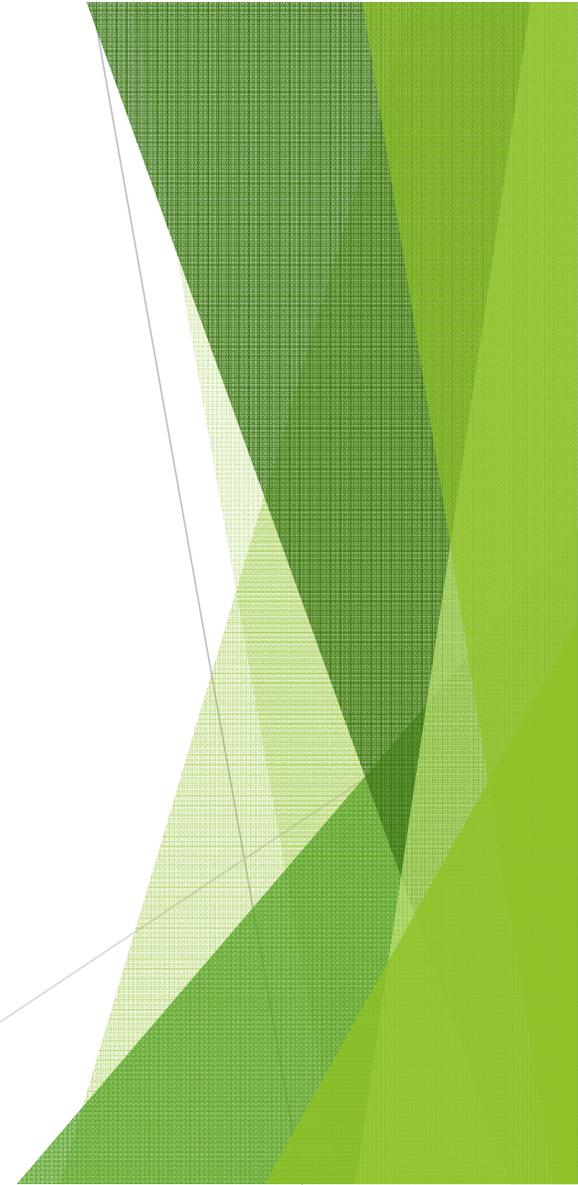
- ▶ Of 937 days ending around 2014:
 - ▶ 80% or 750 days experienced winds over 12 mph
 - ▶ 73% or 689 days experienced winds over 15 mph
 - ▶ 48% or 448 days experienced winds over 20 mph

Comparison Mining

Below and Above the Bench



Dust blowing Across the Valley



Dust carried by the Wind contains PM10 and PM2.5

- ▶ Particulates are the deadliest form of air pollution due to their ability to penetrate deep into the lungs and blood streams unfiltered, causing permanent DNA mutations, heart attacks, and premature death. "Health | Particulate Matter | Air & Radiation | US EPA".
- ▶ In 2013, a study involving 312,944 people in nine European countries revealed that there was no safe level of particulates and that for every increase of 10 $\mu\text{g}/\text{m}^3$ in PM10, the lung cancer rate rose 22%. The smaller PM2.5 were particularly deadly with a 36% increase in lung cancer per 10 $\mu\text{g}/\text{m}^3$ as it can penetrate deeper into the lungs.

Ole Raaschou-Nielsen; et al. (July 10, 2013) *The Lancet Oncology* 14 (9): 813-22.

Crystalline Silica is a Hazardous Air Pollutant (HAP)

- ▶ Utah Code R307-101 definitions state: "Carcinogenic Hazardous Air Pollutant" means any hazardous air pollutant that is classified as a known human carcinogen (A1) or suspected human carcinogen (A2) by the American Conference of Governmental Industrial Hygienists (ACGIH) in its "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, (2009)."
- ▶ ACGIH (2009) lists crystalline silica as A2 or a suspected human carcinogen:
https://www.ehs.uci.edu/programs/sop_library/CARCIN.pdf

Highly Fractured Quartzite

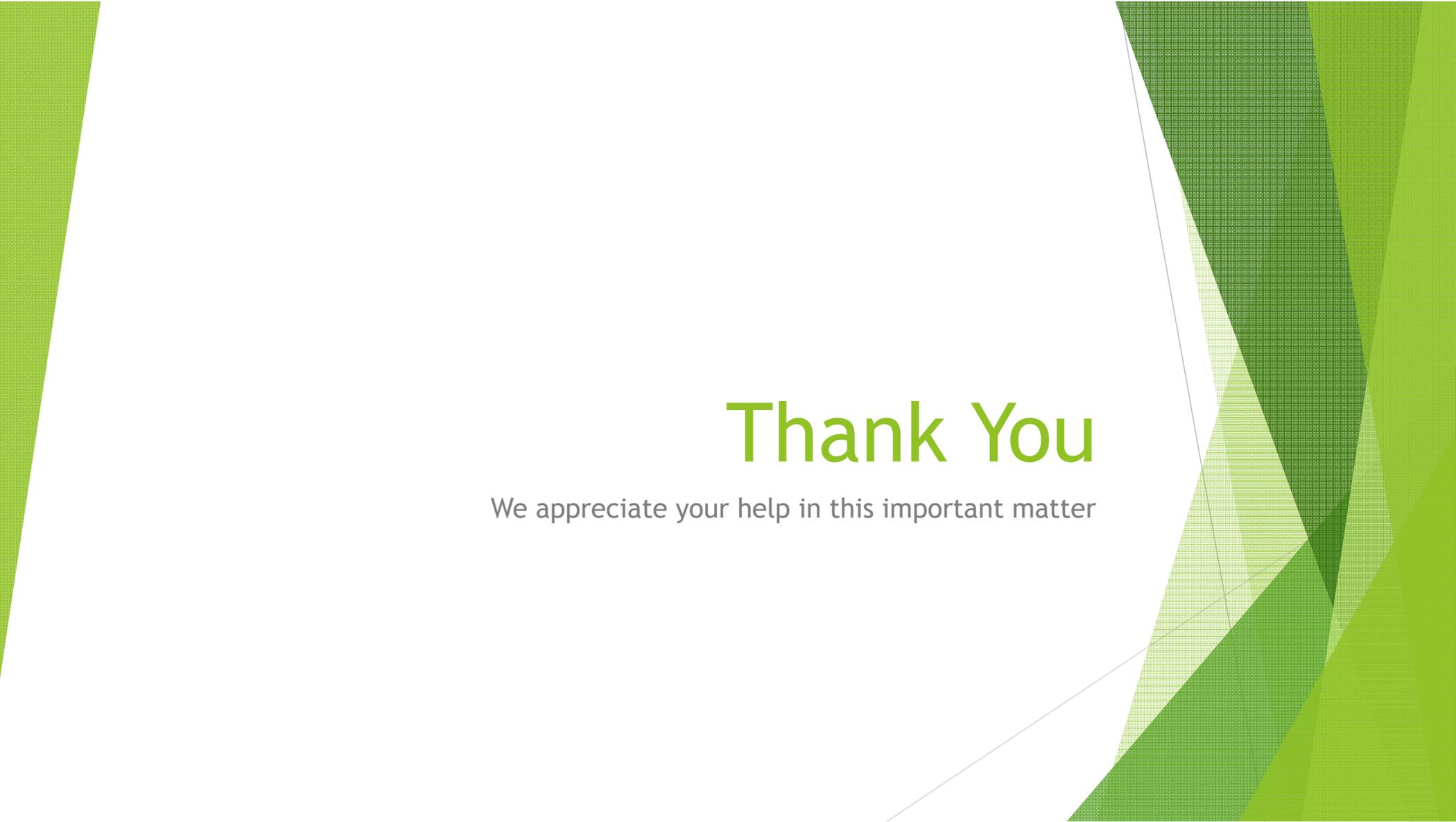


We Ask The Board

- ▶ In accordance with section 104 (powers of the board): Provide a continuous State and Local Air Monitoring Station (SLAMS) around the center of Bluffdale - the most affected area - so we can determine the particle size, frequency and density of this dust. This is also in line with EPA guidelines on providing monitoring in or around point sources.
- ▶ Provide an official analysis of the dust to determine its crystalline silica, particle sizes and heavy metal content.
- ▶ Determine what rules or permit requirements should be revised to take into account unique geological areas like the point, specifically when strong prevailing winds at elevated altitudes may contribute to wind blown fugitive dust emissions.

Proposed rule change:

- ▶ Opacity in R307-309-5(1) shall not apply when the wind speed exceeds 25 miles per hour if the owner or operator **ceases or reduces fugitive dust producing operations** and has implemented, and continues to implement, the accepted fugitive dust control plan in R307-309-6 and administers at least one of the following contingency measures:
 - ▶ (a) Pre-event watering;
 - ▶ (b) Hourly watering;
 - ▶ (c) Additional chemical stabilization; or
 - ▶ (d) Other contingency measure approved by the director.



Thank You

We appreciate your help in this important matter



Utah Physicians for a Healthy Environment
423 W. 800 S., Ste. A108, Salt Lake City, Utah 84101 - 801-502-5450

October 7, 2015

Draper City Council

Dear Draper City Council Members,

Public recognition of the serious air pollution problem along the Wasatch Front is wide spread. As health care professionals we are concerned about the public health consequences of our current pollution levels, and would consider it as unacceptable any developments that would make it worse.

Dust from mining operations represents a significant component of the overall air pollution burden of the Salt Lake Valley and Utah County. While residents near these operations are the most exposed, operations at Geneva's Point of the Mountain gravel pit are particularly troublesome because they are located right where the wind continuously disperses the dust all over both counties.

Gravel pit dust not only contributes to elevated PM2.5 levels, but also contains unique toxins. Soil analysis of the area revealed significant contamination with heavy metals, whose toxicity is well established. Crystalline silica is ubiquitous in the dust and chronic exposure is well known to cause destruction of lung tissue and function, and can lead to tuberculosis and lung cancer. While concerns regarding chronic silicosis are usually limited to those occupationally exposed, nearby residents can be exposed 24/7 rather than merely during work hours, and the residential populations include children and babies in utero, greatly magnifying the public health consequences. Increased dust generated by an expanded Geneva operation would likely continue for decades, and that protracted exposure would undoubtedly have significant, long term public health impact.

The worldwide body of medical research has generated literally thousands of studies identifying the broad base of diseases and impaired health outcomes provoked by particulate air pollution. Numerous additional studies of residential populations chronically exposed to dust from such things as the desiccated Aral Sea, Owens Lake, and the Sahara Desert reveal a wide range of poor health outcomes, including shortened life expectancy, high rates of cancer, infectious diseases, respiratory and heart disease, reproductive pathologies, adverse pregnancy outcomes, anemia, birth defects, and infant mortality.

There is more than enough published science to support the contention that the Geneva gravel pit already represents a serious public health hazard. We believe the current level of mining activity is inappropriate given its location in the heart of the most densely populated area of the state. We understand the Draper City Council is considering a proposal to rezone the area around the pit to allow a 189-acre expansion. We consider this proposal incompatible with what should be the Council's first priority--protection of public health, of families, of children and of pregnant mothers in Salt Lake and Utah Counties, and in the Draper area in particular. We urge you to reject the proposal.

Sincerely,

Dr. Brian Moench, President

Utah Physicians for a Healthy Environment

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