

Group 6

Professor Brown

English 2010

Group Argument Paper

The Unhealthy Utah Air We Breathe

Today the sky is blue and clear with white clouds floating lazily over the mountains. It looks like a perfect day to have a run in the sun or enjoy some leisurely outdoor activities. However, as we check the air reports today there are cautions that state “Individuals are asked to voluntarily reduce driving by consolidating trips and choose cleaner transportation options. Limit volatile organic compound (VOC) emissions” (Utah Department of Environmental Quality) This warning seems incongruous with the peaceful picture before us. The question arises that makes one wonder is the air quality in Utah as bad as the reports seem to imply. Can our air quality really be a major factor that is affecting the health of many Utahans'? Is the reported pollution reduction of 20% in the last 10 years enough? Should we do more to reduce our pollution levels? Thoughts on this topic and the causes of the air pollution can be varied and divided.

Citizen Satisfaction with Air

While many would agree that pollution is a problem, it is not something that most will wake up in the morning and think about first thing. It may only be of concern to many when they see the change in the air during winter and it is noted on the nightly news. While Utah ranks favorably on many of Forbes Best States for Business categories, some categories could be said

to be more prestigious than others. Currently Utah ranks number three overall on the list for best places to do business. This obviously indicates that people feel this is a good place to come and do business. This would also indicate that people feel comfortable bringing their families here. In December of 2013 Gallup had taken a 50 state poll asking how its local citizens felt about their air quality. The Gallup poll noted that solid majorities in every state say they are satisfied with their air quality (Gallup Well-Being, par. 8). One could say that while Utah ranks least satisfied at a 65% satisfaction rating, overall most residents polled at least, are complacent with the causes and effects of pollution or do not see it as an issue of major concern.

Utah Air Concerns

While 65% of the citizens in Utah satisfied with the air quality, which leaves 35% who have concerns about the status of our air. This is not a number to be overlooked and poses the argument that steps need to be taken to make improvements. In winter along the Wasatch Front, Utah residents are all aware of the weather effect known as an inversion. It is a time where the air pollution is easily seen and recognized. This effect allows the pollution to blanket an area where 80% of the population lives within Utah. (Gallup Well-Being, par. 4).

Pollution creates a double edged sword that is a losing situation for all. As Forbes lists Utah among the top for business and toxicity, it may very likely give potential businesses cause for reflection when contemplating a move to our state potential harming our economic growth and stability. In addition, while Utah has its breathtaking views and the potential for a number of recreational opportunities, its visible winter pollution and publicity may also dissuade those from

States Where Residents Are Least Likely to Be Satisfied With Air Quality

	% Satisfied with the quality of air
Utah	65
Nevada	71
California	74
Delaware	76
Arizona	77
New York	78

Gallup 50-state poll, June-December 2013

GALLUP

Figure 1-Gallup Poll

moving here to participate in its splendor. In 2009, Senator Wayne Niederhauser had commented that, “Salt Lake City has a horrendous air quality problem that needs to be addressed and fixed. Reducing carbon emissions has to become the non-partisan solution for improving Salt Lake’s air quality. On bad days, Salt Lake has some of the poorest air quality in the nation“. (SOAR). One summit participant was noted to be considering leaving Salt Lake City after 5 years of bike commuting year round due to asthma caused by the air pollution (SOAR).

Unfortunately, data relating to Air Pollution is cloudy itself. One could also argue that a lack of concern could also be caused by these conflicting data or opinions. For example, Gallup states that leaders in Utah have been attempting to address the issue in recent years (Gallup Well-Being) and despite the low percentage of those concerned with air quality here in our state as given by the Gallup poll, the Utah Sierra Club states on their site that local leaders are “continuing to support a development-focused agenda that only acts to exacerbate pollution.” Even though this example does seem to show conflict within the argument, it only is representative of a pigeon-hole effect given to the problem. The issue is much more complex than many articles, blogs, or other media can address especially keeping in mind their own agendas. While politicians may want to get elected or re-elected, they need to keep both sides of any argument somewhat happy. Utah, like any other state needs jobs, industry, housing and the opportunity for population growth. Unfortunately, the byproduct of this is pollution. Those reflected in the Gallup poll might be hard pressed to care if they did not have job, transportation, or a place to put their heads at night from which they could wake up in the morning to go and get that cup of coffee only to see the pollution and on their drive in to work. Surely, much like the elected officials, even those that are presently concerned with air pollution and its adverse health implications, would be able to find contradictions to their behaviors and the desire to improve air

pollution or pollution in general. As stated within the rest of this paper, we touch on the origins, health effects, and possible solutions. As you read the paper, you may find that there are contradictions in your choices as well in dealing with air pollution. These conflicts do not change the facts that air pollution causes or exacerbates existing asthma in adults and children; increases incidence of SIDS, low birth weight, premature birth, infant mortality; increases heart attacks and strokes; increases blood pressure and shortens life expectancy (Utah Sierra Club). It would seem that given the data on the adverse cause of pollution on health (Utah Sierra Club), more would take note or at least a larger concern than the morning coffee on their way to work. Isn't Granny and little Johnny's health a concern? Besides, Little Johnny may have more to worry about than just the bad air as local school children not only have the adverse health risks to breathing the air pollution, but also due to the fact that schools are now having children stay inside for recess. Not only will they not be getting the physical benefits of playing outside, it can also be disruptive to the teachers who would normally use that time to prepare their lessons (Salt Lake Tribune).

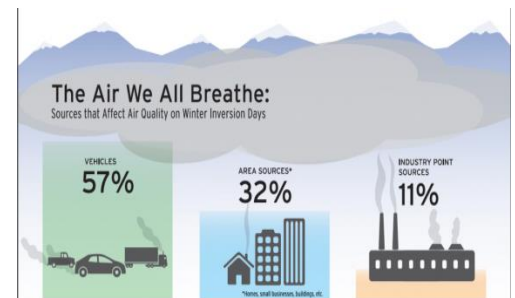


Figure 2- Common causes of air pollution (Richardson)

Origin of Utah Air Pollution

One of the ideas about where this pollution originates points to the factories located in the Salt Lake County area as the major contributors to the air pollution and the cause of major health concerns in the valley. Figure 2 from the Department of Environmental Quality disputes this theory and gives a statistical picture of the major cause of pollution in our valley during the winter inversion days (Richardson). Vehicles currently account for 57% of the pollution we see

throughout the valley and this trend does not seem to be decreasing in the future. The Utah Foundation Research Report suggests that the greatest cause of ozone and fine particulate matter in the state is caused by vehicle usage and that the expectations are that the number of vehicle miles traveled (VMT) by Utahans' will continue to increase due to population growth. They foresee this trend to continue and double by the year 2040 (Utah Foundation 2,3).

There is a growing awareness of the importance of the efforts needed to achieve sustainable means of transportation with regard to air pollution. The transportation sector accounts for almost twenty-five percent of the total commercial energy consumed worldwide and it consumes approximately one-half of the total oil produced. The adverse effects of transportation have a great impact on the natural and human environment. The fossil fuel combustion associated with transportation results in emissions of pollutants. Utah is currently rated the eighth worst state of secondary pollutants (DiSano 9).

With the alarming percent of vehicle contribution within Utah what is the main cause of the contribution? It is reported that cars create two types of emissions that are affecting our air quality. The Exhaust Emissions is the combustion process released from the tailpipe when the car is started or is running. The Evaporative Emissions are the pollutants that escape into the air through fuel evaporation (Transportation Air Quality Facts and Figures January 2006). Recently, Utah did pass a law restricting your vehicular engine idling to a limit of two minutes in hopes to help limit those pollutants. To date there have been no tickets issued to residents which questions the effectiveness of the Idle Free Law. There are other alternatives to using your vehicle in Utah. It seems that if we could carpool as an option that you have the ability to create a positive impact on the environment. It has been reported by the US Census bureau recently that most Utahans

commute by their car and only 6% of commuters use the public transportation system.

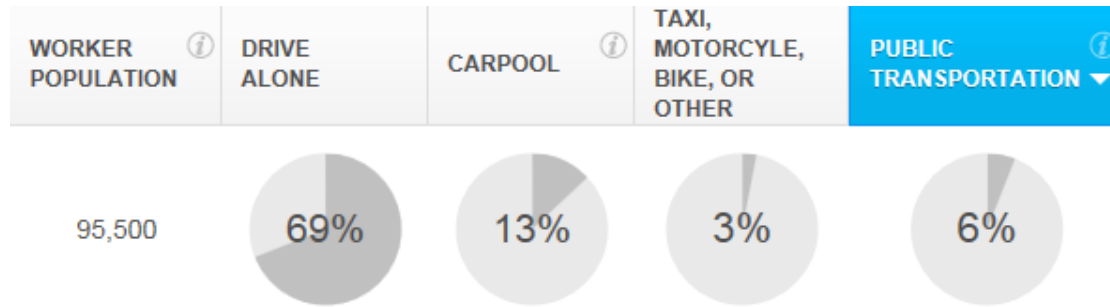


Figure 3 US Census Bureau

The ominous warnings we see today to decrease our driving lead us to explore the hazards of the increase of ozone on a lazy summer afternoon. Ozone is described as the cause of summer pollution and is a mix of volatile organic compounds and nitrogen oxides (Breathe Utah- Our home, Our Air, Our responsibility). Each year public transportation use avoids the emission of more than 126 million pounds of hydrocarbons, the primary source of smog and 156 million pounds of nitrogen oxides which can cause respiratory disease. Public transit vehicles emit fewer pollutants than automobiles. Buses are reported to emit 80 percent less carbon monoxide than cars. Commuter Rails emit almost none (What is Match and Ride).

When these gases that are caused by vehicle emissions mix with sunlight and heat, they create serious health hazards. Breathe Utah presents a list of major concerns related to those who might be sensitive to ozone levels including: “airway irritation, coughing, and pain when taking a deep breath; wheezing and breathing difficulties during exercise or outdoor activities; inflammation, which is much like a sunburn on the skin; aggravation of asthma and increased susceptibility to respiratory illnesses like pneumonia and bronchitis; and permanent lung damage with repeated exposures”. Those especially susceptible are people with lung disease, children,

older adults, and people who are active during ozone pollution season. This leads us to conclude that vehicle emissions are a contributing factor in increased health concerns even in the summer.

Winter health concerns are usually discussed in the headlines of news reports throughout the winter and seem to get more attention than summer pollution. Fine particulate matter is a term used for the mixture of solid particles and liquid droplets found in the air. These droplets are made up of soot, dust, and vehicle emissions and become a particular concern in Utah during the winter inversions (Breathe Utah-Our home, Our Air, Our responsibility). Inversions are caused when there is a cool layer of air near the ground and a layer of warm air blocks the cool air above so that the particles are trapped in the valley (Figure 4) (Utah.Gov). This becomes particularly bad in the Salt Lake Valley because the mountains hold the trapped air within their walls. It was recently stated by Alan Matheson the Utah Governors Environmental Advisor, "As a small state our pollution levels exceed metropolitan areas by five times. On our worst red level air quality days we are 4 times more than the acceptable pollution levels suggested by the EPA. If we took every car off the road and shut down every business during those days we would still exceed the normal standard level of pollution." (KUED) His statement was concerning the alarming number of red air days in the 2013-2014 winter months.

Health Concerns Caused by Air Pollution

The State of the Air 2014 report published by the American Lung Association gave the Salt Lake Valley an F for air quality related to ozone content and 24 hour particle pollution. Clearly, this report reflects major concerns about the air quality in the Salt Lake Valley. Even though the air quality in the United States has improved over the past decade, 47% of the nation lives in areas where the air quality is

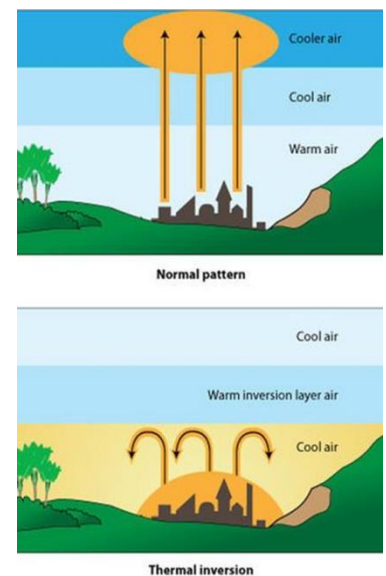


Figure 4-Inversion Patterns

dangerous to the residents' health. This report indicates that even with the facts being presented that there are major health issues related to air pollution, many still try to seek to weaken the Clean Air act that has been in effect since 1970. We would argue with those who claim that air quality is not a major concern to consider the following graphic (Figure 5) which clearly

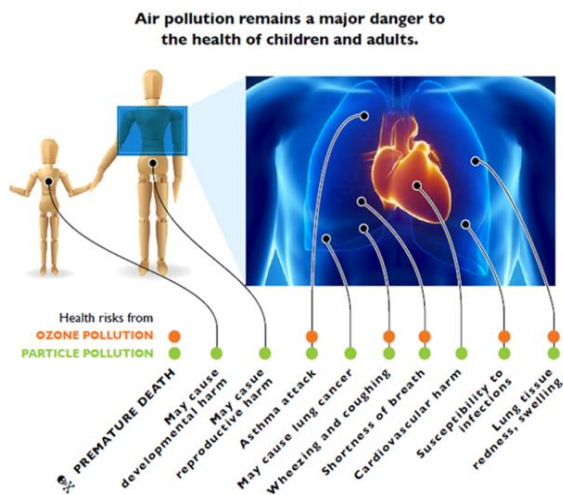


Figure 5- Dangers of air pollution to residents (American Lung Association)

indicates the serious health concerns that can be caused by pollution.

It is often easy to look at how each of us is personally affected when we are asked to change our driving habits. Today, we heeded the warning signs and actually got out of the car and went into Wendy's to make a purchase instead of idling in the drive-through. It seems a small act to try to help improve the air quality, but we all need to take steps

to start to improve air quality.

Solutions to Improve Air Quality

Since the arguments indicate that air pollution is indeed increasing in Utah and the facts support the idea that health issues are on the rise because of air pollution, the next step we would propose is to look at the solutions to this problem. Public transportation seems to be one of the most feasible ways to help reduce the air pollution that we experience during the summer and winter months. There are several benefits to using Utah Public Transportation. It is a safe and affordable way to commute that saves energy while reducing traffic congestion and helping the environment. According to "The Transit Savings Report" issued by the American Public Transportation Association (Transportation Air Quality Facts and Figures January 2006), public

transportation users can save an average of \$142 per month, or about \$5,433 annually. Those numbers are based on a calculation of 20 miles, 22MPG average using a medium sized vehicle with the Trax round trip cost of \$5.00 (Transportation Fuel Calculator). This does not take into effect the cost of tires, maintenance, registration fees or the monthly cost of purchasing your vehicle.

UTA Expansion program

UTA, Utah's Transit Authority has great expansion plans to accommodate the growing population in our state. It is their vision to have every resident of the Wasatch front within one mile of a major transit stop by 2030. Utah's largest project is Frontlines 2015. This includes four light rails and one commuter rail line. They have also stationed Transit study locations to continue to grow the opportunity to service as many areas of Utah as possible. UTA strives to keep up with the latest advancements in fuel technologies that apply to transit configurations at high altitudes. Currently UTA uses bio-diesel fuel mixtures in all of the buses. It is also currently

testing hybrid-electric and compressed natural gas (CNG) buses in its system (UTA Environmental).

The Federal Transit Administration reported that Utah's use of the public transportation system is ranked 40th out of 50.

Hopefully with the expansion

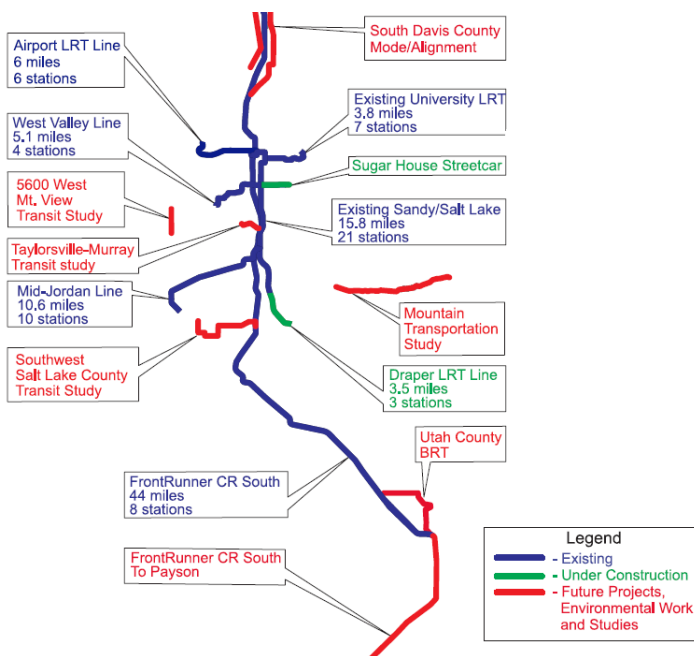


Figure 6-Ride UTA

project it will increase the use. The report stated that there were on average 37,219 riders traveling approximately 255,953 miles (Public Transportation Fact Book). The focus will be for UTA to make sure that the fares are at a reasonable rate and do not exceed what the average commuter can afford. For every 10% rate increase on average there is a reduction in users up to 4%. If more programs for passes were available either through employers, tax benefits or reduced rates for poor air quality days the probability is the percentage of riders would significantly increase.

Conclusion

Statistics can often be used to represent facts in different ways. Even though we see the air around us that looks unhealthy, polls still indicate that 65% or 2 out of 3 people are satisfied with the air we breathe. Many would argue that Utah has been declared a good place to do business by Forbes and that many people locate here for their jobs. This indicates that the concerns about pollution may not be as serious as some would suspect. However, the statistics still point to the fact that 35% of citizens feel that the air we breathe is not safe. The American Lung Association has given the state an F for the amount of ozone in our air over a 24 hour period as we had over 22 days four times higher than the accepted pollution levels this past winter. We argue that even though there are positive facts that the state is to be commended for in helping to make improvements in air quality, there is strong evidence that points to the fact that we need to realize vehicle usage is definitely the major contributor to the air pollution that is endangering to the health of ourselves, our families, our neighbors and possibly future generations inheriting our polluted air.

This concern makes the idea that something needs to be done to decrease vehicle pollution a major subject to be explored by those who are in leadership positions and individual

citizens. It seems apparent by the facts that Utah is behind the national average of riders using the public transportation. This is in part due to the lack of commuter lines being accessible to major employer areas throughout the valley and the fares do not seem to make a significant difference to justify the inconvenience. It is with hope that Utah can use these expansion projects to increase the opportunity to reduce vehicle emissions that heavily influence our poor air quality.

The use of public transportation and reduction in driving days for most citizens would not be an easy task to accomplish. It would require sacrifices on everyone's part. Future dialogue must include the acknowledgment of the improvements made yet include future plans that have to be set forth about changes in public transportation that will make it a palatable option for business and individual riders so they see the benefits that will help them decrease air pollution.

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