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# City of Oshkosh Vehicle Idling Ordinance Proposal



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14 December 2017

## **Executive Summary**

The city of Oshkosh can benefit from the implementation of a vehicle idling policy, this policy would limit the amount of time that combustion engines can run while the vehicles are stationary. There are three main goals that this policy will help the city of Oshkosh achieve. The first goal is to spend less on fuel annually by simply turning vehicles off during times when idling is unnecessary. This will reduce the amount of fuel consumed, meaning that less money will be spent on fuel itself. The second goal is to improve the air quality in our community by reducing the amount of particulate matter in the air caused by vehicle exhaust. Emissions from vehicles are a direct link to illnesses such as asthma, delayed lung growth, and even lung cancer. The final goal of this ordinance is to reduce greenhouse gas (GHG) emissions, and overall reduce Oshkosh's carbon footprint. Emissions are not only harmful to human health, but to the environment as well. This ordinance provides Oshkosh with the opportunity to be a leader in the Fox Valley, and lay the groundwork for other cities to follow suit. Implementing this policy will

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allow our community to save money on fuel, reduce CO<sub>2</sub> emissions, protect public health, and improve air quality all while progressing toward the cities sustainability goals.

## **Background**

The problem with vehicle idling is that it increases the amount of CO<sub>2</sub> emissions in the air. This is a health concern for not only children and elderly/medically fragile individuals, but also the health of the environment. Another issue with vehicle idling is the unnecessary costs vehicle owners pay in the way of fuel expenses. By creating a vehicle idling ordinance in the city of Oshkosh we hope to address the problem of excessive CO<sub>2</sub> emissions and pollutants contaminating the air that community members breathe. If the issue is not addressed, Oshkosh will continue to add Greenhouse Gas (GHG) emissions into the air which would continue to make the city an unhealthy place to live. By proposing the vehicle idling ordinance we hope to help the city reach its sustainability goals set in the Sustainability Plan and make Oshkosh a better place to live. Currently, the city of Oshkosh has not proposed anything similar to the vehicle idling ordinance laid out in this proposal.

The city of Oshkosh has the opportunity to be leaders in air quality issues related to idling, by recognizing the many health risks associated with poor air quality. An article from the Environmental Magazine entitled "Flashing Lights- Danger: Polluting School Bus Ahead" explains that because of their developing anatomy, children are more sensitive to diesel emissions than adults, and exposure to particulate matter from diesel fuel has been linked to asthma, delayed lung growth, and cancer (2006). Some cities have acknowledged idling as an issue without implementing an ordinance. These campaigns

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focus solely on educating the public about health risks associated with idling in an effort to reduce it. For example, Milwaukee Public Schools hosted an anti-idling campaign in 2010, and now have strict regulations against idling near their public schools, and general idling while students are in the bus. Research shows a correlation between children who are regularly around vehicle emissions have significantly decreased level of health. The city of Oshkosh needs to acknowledge the health implications that come from idling. Oshkosh is morally obligated to protect the children, elderly, and medically impaired individuals living within the city who are most susceptible to vehicle idling emissions.

### **Recommended Ordinance**

This ordinance aims to make Oshkosh a more healthy and sustainable community, while also recognizing the transportation challenges that the city faces. Vehicle idling for things such as extreme weather, emergency vehicles, utility vehicles, etc. are all taken into consideration under the recommended ordinance. By implementing this ordinance it would be a step in the right direction for protecting air quality of our city, especially in areas where children and elderly residents are present. We are recommending a two phase implementation of this ordinance. Phase one would focus on the regulation of idling for municipal vehicles only. Municipal vehicles that require engine idling to operate various equipment are under exemptions 5 and 7 below. After the municipality is comfortable with phase one of the ordinance, phase two will commence. Phase two extends idling regulations to privately-owned vehicles. Under both phases of the vehicle idling ordinance, city-owned and privately-owned vehicles would be prohibited from

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idling more than five minutes within a sixty minute period, except under the following circumstances<sup>1</sup>:

1. The motor vehicle idles to operate defrosters, heaters, air conditioners, or other equipment while the temperature is either below 20 degrees Fahrenheit or above 90 degrees Fahrenheit;
2. The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency, including for the purpose of providing shelter;
3. The motor vehicle idles while forced to remain motionless because of traffic, a traffic control device or signal, or at the direction of a law enforcement official;
4. A police, fire, ambulance, public safety, or other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency situation or training mode and not for the convenience of the vehicle operator;
5. The motor vehicle is owned by an electric utility and is operated for electricity generation of hydraulic pressure to power equipment necessary in the restoration, repair, modification, or installation of electric utility service;
6. An armored motor vehicle idles when a person remains inside the vehicle to guard the contents, or while the vehicle is being loaded or unloaded;
7. When idling of the motor vehicle is necessary to operate auxiliary equipment to accomplish the intended use of vehicle (such as operating refrigeration unit, lift, crane, pump, drill hoist, or concrete mixer), provided that this exemption does not

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<sup>1</sup> Exemptions modeled after vehicle idling ordinances from the City of Madison, WI and the City of Evanston, IL. (appendix A)

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apply when the vehicle is idling solely for cabin comfort or to operate equipment that is nonessential to the intended use of the vehicle;

8. A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection;
9. The engine idles when necessary for maintenance, servicing, or diagnostic purposes.

### **Recommended Enforcement**

It would be most beneficial to assign the responsibility of enforcing the ordinance to parking enforcement officials. This would be an additional duty included in their job, and therefore no additional costs or labor would be required. Parking enforcement officials would have the authority to cite anyone who was not in accordance with the idling ordinance. However, it is recommended that the first corrective action taken against an individual be directed toward a letter that is sent to the address registered to the idling vehicle (appendices B and C). The city of Madison, WI has used this strategy since implementing their ordinance in September of 2017, and this has worked really well to spread the word about why the ordinance exists. After significant awareness of the ordinance is achieved, the Oshkosh Police Department would advance to monetary citations. These citations would be approximately \$50-\$150 based on the severity of idling and type of vehicle. These fines are based off the benchmarking cities, found on pages 13-16 of this document. Subsequent violations would result in increasing fines. It is

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encouraged that larger vehicles and diesel vehicles receive a more costly fine, as their impact of idling is more significant than a standard passenger motor vehicle. It is also recommended that a citizens-report method be encouraged, where citizens are able to call a designated number to report an ongoing idling situation. This promotes overall community well-being, and holds the citizens of Oshkosh accountable.

## **Stakeholders**

The following identified stakeholders in the city of Oshkosh may be affected by this ordinance or might have an effect on the implementation of this ordinance. The passing and successful implementation of this ordinance will be determined by these stakeholders and it is important to identify and communicate with as many of them as possible prior to the passing of the ordinance. Listening to all of these perspectives and concerns allows us to propose the most well-rounded ordinance and increase the chance that it will be implemented by the city. There are different degrees of stakeholders in a city depending on various factors such as economics, social status, and environmental concerns. We have attempted to communicate with as many of these different perspectives as possible and any concerns or ideas can be expressed and addressed in our ordinance. We have categorized these different stakeholders according to their relationship with the proposed ordinance.

## **Primary Stakeholders**

### **GO Transit**

Jim Collins is the transportation director for Go Transit and is a primary stakeholder for the vehicle idling ordinance. Jim Collins asserted that the Go Transit busses would need to be exempt from the vehicle idling ordinance, however, they would



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support the ordinance. Jim Collins gave the following reasons as to why he thinks that Go Transit should be exempt from the ordinance:

1. It is extremely hard on diesel engines to continually start and stop, and the transit buses are continually moving all day/every day. Continuing to stop and start reduces the engine life and increases maintenance issues and costs. These issues would lead to reduced service reliability which is unacceptable.
2. One of priorities in public transit is passenger comfort – heating and cooling is accomplished while the engine is on.
3. Diesel technology continues to advance. Each generation of buses burns much cleaner than the previous. The technology is pretty far advanced so that environmental impacts are minimized.
4. The buses don't really idle anywhere for more than 5 minutes. When they are idling, it is generally while transferring passengers.
5. Go Transit busses are also parked inside so they don't need to idle in the morning in order to warm up the busses for passenger comfort, which has also reduced emissions associated with idling.
6. Go Transit has ordered 7 new clean diesel buses which alone will help reduce emissions as the diesel technology is so far advanced beyond the current busses in operation. They are replacing seven 2003 buses with 2017 busses next spring.

#### Public Works Department

James Rabe, director of the public works department in Oshkosh, is a primary stakeholder for this policy. Most of the city owned vehicles that would not be exempt from this ordinance run through his department and it is important that the city work with

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him when creating the vehicle idling policy. In speaking with James Rabe, he included a list of all the reasons that city vehicles need to idle (appendix D). Most of these reasons he gave for the vehicles idling were for running equipment that is attached to the vehicles. Exemption number 7 from our recommended ordinance remedies this problem. Because James Rabe plays a crucial role in the future of the vehicle idling ordinance, the city should work with him and take his opinions into consideration when creating a policy.

#### Oshkosh Police Department

The Oshkosh Police Department is a primary stakeholder for the vehicle idling ordinance because they would be in charge of enforcing the ordinance. Unfortunately, nobody at the department was available for commenting on the ordinance at this time. However, it is crucial that if the city decides to move forward with the vehicle idling ordinance that they are consulted and their opinions taken into account.

### **Secondary Stakeholders**

#### Oshkosh Fire Department

The Oshkosh Fire Department is a secondary stakeholder for the vehicle idling ordinance because they would be indirectly affected by this ordinance. We talked to Brian Bending, who is the Battalion Chief and Fire Marshal for the City of Oshkosh Fire Department. He expressed that the Oshkosh Fire Department would support our proposed vehicle idling ordinance but emergency vehicle would need to be exempt when on an emergency call. Firefighters are well respected member of the Oshkosh community, and having their support would be beneficial to the passing of the proposed ordinance.

#### Oshkosh Area School District

Susan Schnorr is the Executive Director of Business Services with the Oshkosh Area School District. She handles the contract between Kobussen Ltd and the OASD. She was not in favor of the idling ordinance due to Kobussen's already implemented anti-idling strategies. Kobussen Ltd. has a companywide rule that prohibits school buses from idling for more than ten minutes. She also stated that buses near the school are routed in a way that prevents excessive idling. Susan Schnorr also showed concern for small children and other students with medical needs that would require a controlled climate. The ability of the OASD and Kobussen Ltd. to revise their contract to comply with the ordinance is a crucial factor to the success of its implementation.

Allison Garner, President of the Board of Education of the Oshkosh Area School District, was in favor of the ordinance. She also suspected that many board members and students would also support anti-idling efforts. Allison Garner stated that it would also be a beneficial learning experience for the students to learn about air quality issues, and has the possibility of inspiring projects for STEM (science, technology, engineering, and mathematics) and APLS (advanced project-based learning for students) based schools.

#### Taxi Services

The Oshkosh City Cab Co. was not in support of nor in opposition to the vehicle idling ordinance. Their only concern with the ordinance was their ability to keep their cabs at a comfortable temperature for their clients because they are often elderly. This problem can be bridged with the ordinance exception to vehicles transporting individuals with handicaps that require climate regulation.

#### Oshkosh Resident and Retired Teacher

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Tina Haffeman is a secondary stakeholder. Being a former school teacher, she was in favor of this policy as soon as I mentioned that it harms students who are waiting for buses before and after class. She mentioned how she can visibly see the layer of engine exhaust surrounding the buses in the winter and acknowledges that this cannot be healthy for the students. Her solution was a public education campaign to address the issues this can present on school grounds. She also mentioned that she works first hand with homeless citizens in Oshkosh that use their vehicles as temporary shelters, and that allowing them to run keeps the temperatures bearable. This alluded to the exemptions that must be acknowledged, as this is not a one size fits all policy.

Business Owner- Lakeside Plastics, Jeff Seibold

This is a family owned manufacturer of traffic safety products. Chances are, every safety cone you see in the state of Wisconsin, came from this business. Jeff said that he currently employs roughly 160 people. Jeff had a smooth and efficiently operating business that consistently does well. Initially, The idea of implementing a policy change that could affect his business made him skeptical. He explained to me that of the six semis logistically involved with his business, Lakeside Plastics owns, and financially supports one of them. Once he was aware that adhering this idling policy could save him money on fuel and engine degradation. The financial gains acquired his attention and general acceptance of the policy.

Business Owner- Skor Properties and Gartman Mechanical, Scott Olejnik

Both businesses operate out of Oshkosh and employ roughly 26 people, depending on seasonal employment. Gartman Mechanical has a 20-vehicle fleet. Again

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he was weary of his business being affected by the policy but also understands that idling is not easy on vehicles. Inevitably, when consider the financial implications, approved of the policy

### Supervisor of (UWO) Grounds and Automotive Facilities, Lisa Mick

Lisa is responsible for supervising 20-25 employees, given seasonal jobs. Her job utilizes roughly 15 vehicles, many which are large trucks. She goes as far as telling her own student workers to turn the vehicle off in the winter. The same idea was voiced during the warm months in regards to air conditioning and cooling the vehicle. This sets a standard on campus. The campus itself, is highly influential to the city and other campuses. Ultimately, Lisa Mick plays a highly influential role on the campus and this idling policy can complement that influence.

### Experts Madison Police

Captain Richard Bach is in charge of Traffic and specialized services for the Madison Police Department, where they have already implemented vehicle idling ordinance. Captain Bach informed us that their vehicle idling ordinance started out as an educational campaign to reach out to the community. This involved educating people about some of the common misconceptions that people associate with idling and inform people about reasons to reduce idling. Idling factsheets were distributed to households by mail and talked about the dangers to children's health, the ability to reduce fuel consumption, and saving money. This was encouraging to hear because our campaign will be centered around children's health and saving people money. He also informed us

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that this isn't a black and white enforcement policy and officers are encouraged to use their discretion when giving out a ticket. This ticket is then distributed in the mail along with an information sheet on the ordinance and why it is important. A person's first offense is a warning so they can be made aware or reminded of the ordinance. The Madison Police department ability to be transparent with the public has resulted in the successful implementation of their vehicle idling ordinance. Captain Richard Bach would be a great resource for Oshkosh to use if the city decides to move forward with the proposed vehicle idling ordinance.

#### City Manager

Mark Rohloff is the City Manager here in Oshkosh and provided some valuable insight on how an ordinance typically gets adopted by the common council. Ordinances are typically adopted by the Common Council through one of four general ways: (1) A proposal by one or more Council Members; (2) a recommendation from a board or commissions (in this case perhaps from the Sustainability Advisory Board; (3) a proposal, suggestion, or petition by the public asking Council to adopt an ordinance; or (4) a recommendation of staff.

When an ordinance is suggested that covers a new area (such as a vehicle idling ordinance), the Council typically directs staff to analyze where else this is being done, how it works, experiences of other communities with a similar ordinance, and the impact of such an ordinance, including resources (budget and/or staff) necessary to enforce such an ordinance. The Council may also want to know if there are any options which closely resemble such an ordinance and/or offer an alternative way to achieve the desired objective. Following that analysis, the Council may then direct the City Manager

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to have the City Attorney prepare a draft ordinance, after which the Council would take action on a proposed ordinance. A new ordinance is subject to a public hearing, and is required to be read at two consecutive Council meetings before it is adopted by Council. Mark Rohloff insight was extremely helpful to help understand what information is necessary to obtain before the creation of a proposed ordinance.

## **Benchmarking**

### **Madison**

Madison Wisconsin just recently implemented their vehicle idling ordinance in September 2017. Alder Ledell Zellers was the main force behind this ordinance passing. She went to many town and city government meetings with the intentions of educating government officials and the general public about the health risks and fuel costs that idling vehicles caused. When speaking with Ledell Zellers on the phone she said that education was key in getting the ordinance passed. She said that most people do not even think about the health problems that idling cars has on young children but once they are educated on the issue they are willing to comply with the idling ordinance in order to keep children safer and healthier. Ledell Zellers also said that the education on costs associated with idling cars helped to motivate people to comply with the idling ordinance and said that there are a lot of misconceptions and myths around engine life and quality and turning your vehicle on and off. Ledell Zellers share the vehicle idling fact sheets that madison used in the education process for this ordinance (appendix B). Ledell Zellers said that there were originally a lot of critics to the ordinance (such as the bus

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company and utility workers) but by sitting down with them and coming to compromises and by examining their vehicle use they determined that they could, in fact, follow the ordinances regulations. She stressed heavily that educating people was key to passing the ordinance and that once misconceptions were corrected that almost everyone got behind the ordinance.

Captain Richard Bach, the Police Traffic & Specialized Services director for the Madison police department, was also available for commenting on the vehicle idling ordinance in Madison. Richard Bach said that Ledell was the key force behind the ordinance passing and that her presence at the city council meetings made an important impact in getting the ordinance passed. Richard Bach also said that education was key in getting the community to comply with the ordinance. As for enforcing the ordinance Richard Bach said that each officer can use their own judgement on whether or not to give a citation just as they can with any other laws. The officers do not directly approach a violator, instead they send them a letter in the mail explaining the Vehicle Idling ordinance. Their first offence is a warning and after that citations are given. You can find the sample letter that they send to violators attached at the end of this document (appendix B).

### **Salt lake city**

Salt Lake City Utah passed their first vehicle idling ordinance in 2008 making idling a vehicle for more than 5 minutes illegal. Then in 2011 they expanded on their original ordinance and cut the idling time restriction down to 3 minutes. One of the major concerns that came up during the ordinances proposal was if it would be enforceable among city owned vehicles. They had two options: 1. To install equipment that would



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track speeds, vehicle uses, and idling or 2. To create incentives for employees who were able to reduce their total fuel use. They favored the second option because it did not involve the city having to spend additional money. Another concern that was brought up was by businesses with drive-thrus, although normally cars are not in drive-thrus for that long the city will have signs that these businesses can display in their windows to remind drivers of the ordinance.

## Appleton

The Green Tier Legacies Community has Appleton listed as one of the communities that has created a vehicle idling ordinance for their city municipal vehicles. However, when I contacted the Appleton public works department they said "I am not aware of any City Ordinance regarding vehicle idling. The Public Works Department does have a section in our Work Rules that states: *'Vehicles shall not be left running, unless necessary to operate essential vehicle accessories, such as warning flashers, generators, etc.'* Our vehicles have GPS units that give us an email notification if a vehicle is idling longer than a specified amount of time. Employees are disciplined if not following any of our Work Rules." (Paula Vandehey, P.E. Director of Public Works City of Appleton). There were a lot of people who I talked to when trying to find the right person to talk to who were very confused when I brought up their Vehicle Idling Ordinance who seemed to have no idea what I was talking about. This was very disheartening considering all of these people were city employees. The goal for Oshkosh is to be better than this by making sure everyone is educated on the implications of vehicle idling.

## Eau Claire

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The City of Eau Claire also has a vehicle idling policy in place for their city municipal vehicles. This policy can be found at the end of this document (appendix E) Eau Claire is another city that is very similar in size to Oshkosh, making it easy for Oshkosh to adapt the same policy. Eau Claire's policy is a much simpler than the one from Evanston Illinois but still covers all the essential details.

## **Costs**

As previously discussed in benchmarking, other cities have enforced similar policies without developing a new enforcement budget or designating an enforcement group. This is due to the fact that both the workforce and budget already exist. The most efficient way to enforce this policy would be to utilize the parking patrol officers. They are already on duty enforcing lawful parking practices. This idling policy would simply act as another duty prescribed to them and would not require any additional funding. Once the policy is implemented.

## **Cost of Idling per Vehicle**

It has been determined that saving more is going to be a result of spending less, and this policy does just that. Research indicates that the average driver idles their car for 16 minutes per day (Carrico et al. 2009), but not all idling is deemed "unnecessary". Statistically, 4.2 minutes are spent warming the vehicle up and 3.7 minutes are spent waiting to pick someone up (Figure 1.7) . The remaining eight minutes are spent in traffic, or stop lights. During this time for obvious safety reasons it is entirely acceptable to maintain an idling state. The remaining eight minutes are where this policy can be implemented and can amass immense city wide savings. As of 2015, the Census Bureau

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observed that there are 26,152 households in Oshkosh and that the average household owns two vehicles (Figure 1.3). From this we can figure there are roughly 52,304 cars in Oshkosh. The census bureau also reveals that 83% (Figure 1.4), or 43,412 drivers in Oshkosh on a daily basis drive alone. If each of those vehicles were to idle for the previous prescribed 8 minutes of idling, that would amount to 5,788 hours of idling time! The average compact sedan consumes .17 gallons per hour while driving, as compared to a large sedan, which consumes .39 gallons per hour of idling (Figure 1.1). To err on the side of caution and eliminate any risk of bias data, we are going to assume every vehicle in Oshkosh is very fuel efficient and uses only .2 gallons per hour of idling. At this rate that is still 1,157 gallons of fuel that virtually served no purpose. If the price of fuel were to remain at the current constant rate of \$2.49, annually that would amass \$1,073,260 that Oshkosh residents did not need to spend. Not to mention each of these vehicles emits an average of 1.4 grams of carbon per second while idling (Frey et al. 2003). That means these vehicles are omitting 391,232 pounds of carbon dioxide into the atmosphere annually, which can also be assumed as a health cost.

Now obviously the fleet size of the municipal vehicles in Oshkosh is much smaller than 43,000. Regardless Oshkosh licensed 185 vehicles this year. The majority of which were comprised of large utility vans and trucks, including waste management vehicles, snow plows, transit buses and excluded all emergency/ first responder vehicles. The idling rates of these types of vehicles are generally very intense (See idling rate chart). Medium- heavy trucks are going to consume .9 gallons per hour and transit buses are going to consume over a gallon per hour of idling (Figure 1.1). We are going to assume that the average vehicle in the fleet consumes .9 gallons per hour. Also, we will maintain

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that each vehicle only idles for 8 minutes daily, although given the purpose and use of these vehicles, it is likely much higher. If gas were to again, remain at the constant of \$2.49 throughout the year, and we only accounted for the 5 day work week, the city could still save \$14,411 annually. Other cities that have already been successful implementing a vehicle idling ordinance have used economics and cost-savings as a motivator. Ordinances that limit idling have already been implemented in cities all over the world, and Oshkosh could be at the forefront of this movement. The amount of bridges and railroad crossings in the city make Oshkosh the perfect place to implement this ordinance and start saving it's citizens money. This proves the recommended ordinance can save more by spending less.

## **Barriers**

There are some barriers that exist specific to Oshkosh that we have identified that require further consideration. The first barrier is acknowledging various myths surrounding idling. A common misconception is that engines, specifically diesel engines, need to idle in the morning to warm up the engine. This used to be true because diesel fuel would gel-up in freezing weather. However, new winter blends of diesel fuels have been created that actually make idling harder on the engine. Another barrier that must be considered is the amount of bridges and trains in Oshkosh. Drawbridges often stop traffic in the summer when large boats need to pass under them, and trains stop traffic many times a day all over our community. Both result in vehicles idling for extended periods of time. These areas would be excellent locations for signs that remind citizens of the vehicle idling ordinance. The ability to enforce such an ordinance would likely be the

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biggest issue, as it might be difficult to enforce this uniformly as warnings and citations are given at the officer's discretion. However, this is the same barrier that officers face when enforcing speed limits. There are also some concerns that may arise with regards to emergency vehicles that must idle along with concerns about extreme temperatures. However, both of these concerns are addressed in the exemptions section of the recommended ordinance.

Another barrier that will arise with this ordinance is convincing the general public that reducing idling is important. To address this, it will be important to know the specific audience and the values that they hold. The vehicle idling ordinance can be presented in two different ways by appealing to the head or the heart. By appealing to the heart, it will be important to focus on the health related conditions that can affect children and the elderly. The second way this ordinance can be presented is by focusing on the economic factors. This means emphasizing the fuel savings and maintenance savings that can occur through the reduction of vehicle idling.

When Salt Lake City proposed their vehicle idling ordinance, one of the major barriers that they faced were concerns from the fast food and banking industries with regards to drive-thrus. This problem was combated by collaborating with the business owners, and coming up with solutions. In Salt Lake City, they placed signs in drive-thru windows that helped remind residents of the vehicle idling policy.

### **Significance for Sustainability**

The transportation sector accounts for a large portion of energy use and is easily the least efficient sector. With world population on the rise, more vehicles are hitting the roads every year and total miles traveled has risen as well. Vehicles are among the

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leading contributors to air pollutant and greenhouse gas (GHG) emissions, which impact human health and contribute to global climate change. Most of the energy to move a car is lost as waste heat, which is one of the reasons the transportation sector is so inefficient. Idling proves problematic because the vehicle is burning fuel and releasing GHG emissions while providing no motion services to the passenger. Thus, reducing idling time in Oshkosh is an opportunity to promote a healthier atmosphere in the city by reducing emissions and also help to save people money by reducing fuel consumption. Other cities that have already been successful implementing a vehicle idling ordinance have already begun to see improved air quality as well as reduced fuel consumption, which is saving it citizens money.

Cities like Oshkosh have the opportunity to become leaders in reducing greenhouse gas emissions and improve the transportation sector. The city of Oshkosh is on the right path to becoming one of these leaders with the formation of their sustainability plan. Oshkosh's Sustainability plan states that "The best sustainability ideas should simply become the way things are done in Oshkosh" (2012). The city has done a number of things to become more sustainable since the creation of their sustainability plan. So one of the thing that was really important to us was to make a connection between this ordinance and the objectives identified in Oshkosh's Sustainability Plan. How could this proposed ordinance reinforce the overall goal of the sustainability plan which is to improve the quality of life in Oshkosh? There are too objectives that this ordinance really build on and those are the objectives for atmosphere and government.

The city's objective for atmosphere is to "Provide a safe and healthy atmosphere for people, nature and the planet" (2012). When people leave their cars running in the

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driveway or outside of the store, they are polluting the air they breathe, while they aren't even driving. According to a study conducted by the Environmental Defense Fund in New York City alone, idling trucks and cars produce 130,000 tons of CO<sub>2</sub> alone ("Attention drivers!", 2009). New York City is obviously has a much bigger population and more cars but there is a lot for Oshkosh to take away from this. Any reduction in the amount of time that people can idle for in the city of Oshkosh will reduce the amount of CO<sub>2</sub> and other pollutants released into the air and promote a healthier atmosphere in our city. This would also reinforce Oshkosh's objective for a safe and healthy community, which is to "Promote healthy living, civic engagement, cultural and ethnic diversity; provide safety and protect citizens from disease" (2012). Idling emits greenhouse gases and other pollutants into the atmosphere. This can especially be a problem around schools where parents and buses idle while they pick up and drop off children, who are especially vulnerable to these pollutants. These pollutants have been linked to serious human illnesses including asthma, heart disease, chronic bronchitis, and cancer (Zhang et al. 2013). Reducing the amount of idling time in Oshkosh is a great way to mitigate these illness and protect citizens from disease by reducing the amount of pollutants entering the atmosphere.

## **Conclusion**

If the City of Oshkosh can come up with an effective way to reduce greenhouse gas emissions and improve transportation, these ideas will likely spread to other cities. Oshkosh has the opportunity to become a leader in pursuing small scale actions that drive sustainability and, in aggregate, can have global results. Once these ideas spread to other cities, they can benefit the country as a whole by reducing GHG emissions

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(Bloomberg 2016). Oshkosh is following, and in some ways leading, the national patterns to become more sustainable by encouraging individual and local actions but at the same time implementing policies that encourage industries and communities to act as well. An ordinance that limits vehicle idling time in Oshkosh will reinforce the city's pursuit of sustainability. This proposed vehicle idling ordinance is an opportunity for Oshkosh to reduce idling time, which will promote a healthier atmosphere in the city by reducing GHG emissions and also help save people money by reducing fuel consumption. In order to achieve sustainability on a global scale, we need people to improve cities, and in effect states, countries and that can change the world. Implementing this policy will allow our community to save money on fuel, reduce CO<sub>2</sub> emissions, protect public health, and improve air quality, with no expense to the city. The best sustainability ideas should simply become the way things are done in Oshkosh. The time to take action is now, and Oshkosh has the ability to become a leader in combating climate change.



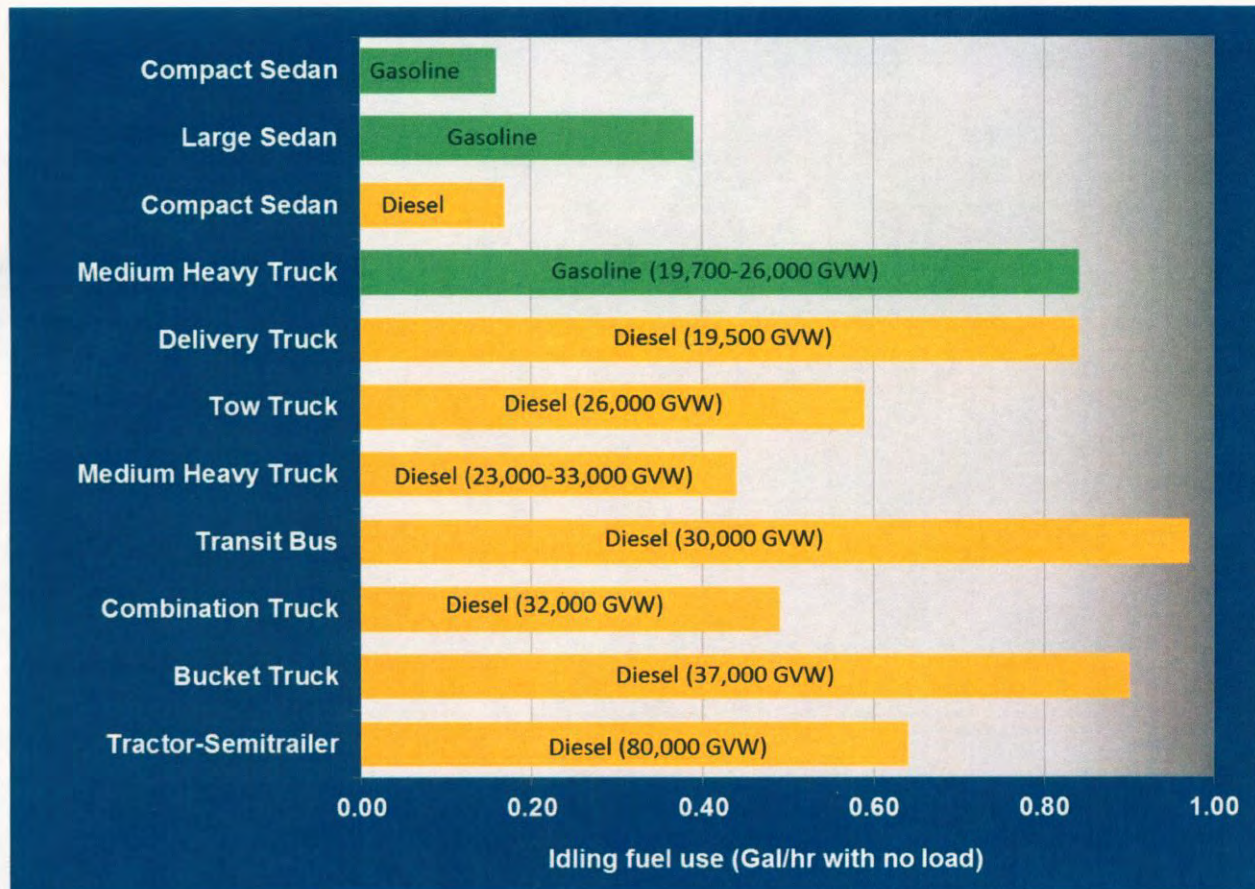


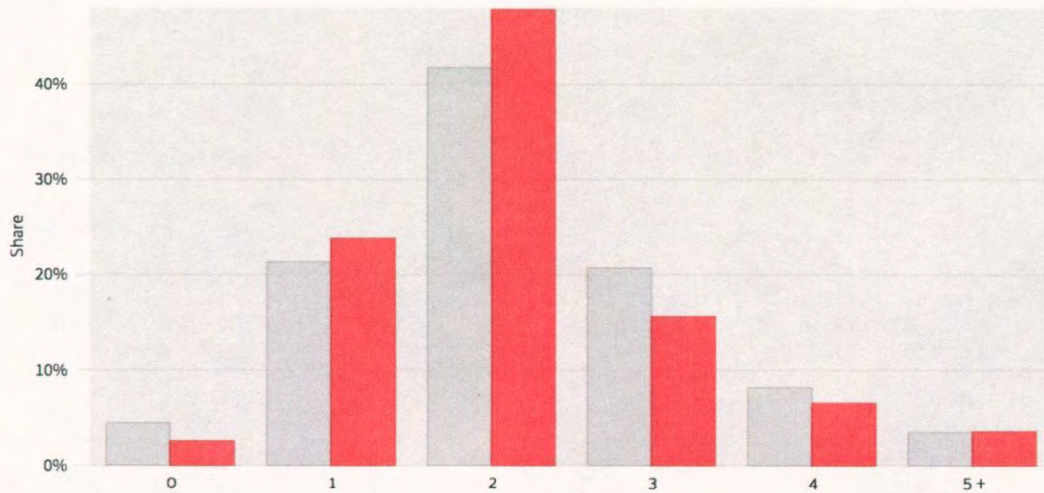
Figure 1.1: Office of Energy Efficiency & Renewable Energy

	min/day	CO <sub>2</sub> emissions		Fuel consumption	
		Annual per person emissions (pounds/kg)	Annual US emissions (MMt)	Annual per person consumption (gallons/l)	Annual US consumption in billions (gallons/l)
Warming	4.2	283.9/128.8	24.5	14.6/55.3	2.8/10.6
Waiting	3.7	250.1/113.4	21.6	12.8/48.5	2.4/9.1
Traffic	8.2	554.3/251.4	47.8	28.4/107.5	5.4/20.4
Total	16.1	1088.3/493.6	93.9	55.8/211.2	10.6/40.1

Figure 1.2: Carrico et al. 2009

## Car Ownership in Oshkosh, Wi

Please note that the buckets used in this visualization were not evenly distributed by ACS when publishing the data.



Dataset: ACS 5-year Estimate  
Source: Census Bureau

DATAUSA:

Figure 1.3: US Census Bureau

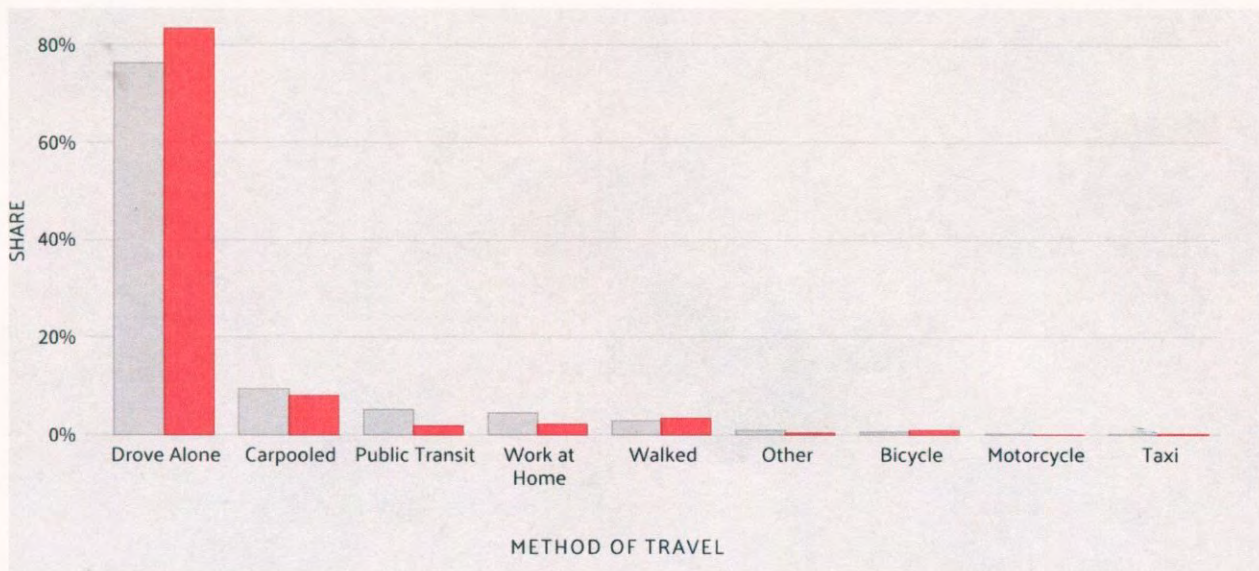


Figure 1.4: US Census Bureau

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**Important Contact Information**

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Captain Richard Bach

Madison Police Traffic & Specialized Services

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Madison, WI 53703

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Email: [rbach@cityofmadison.com](mailto:rbach@cityofmadison.com)

6/27/2006  
6/21/2006  
6/20/2006

**75-O-06**

**AN ORDINANCE**

**Amending Title 10, Chapter 4, "Stopping, Standing Or Parking"  
of the Evanston City Code, 1979, to Add a New Section  
Regulating the Standing or Parking of Idling Motor Vehicles.**

**WHEREAS**, pursuant to Chapter 11, Section 208 of the Illinois Vehicle Code, the City of Evanston as a home rule unit may enact local Police regulations regulating the standing and parking of vehicles.

**WHEREAS**, the standing and parking of idling motor vehicles releases particles which can cause lung damage and aggravate existing lung diseases such as asthma; and

**WHEREAS**, children and the elderly are particularly susceptible to the negative health effects of motor vehicle pollution; and

**WHEREAS**, the standing and parking of idling motor vehicles for extended periods of time is generally unnecessary, contributes to noise pollution and wastes fuel;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL  
OF THE CITY OF EVANSTON, COOK COUNTY, ILLINOIS:**

**SECTION 1:** That the Evanston City Code, 1979, as amended, be and hereby is further amended by adding to Title 10, Chapter 4, a new section, Section 18-1, which reads as follows:

**10-4-18-1: REGULATION OF STANDING OR PARKED IDLING MOTOR VEHICLES:**

No standing or parked motor vehicle with a gross vehicle weight rating of eight thousand pounds (8,000 lbs.) or greater shall be allowed to idle for more than a total of five (5) minutes within a sixty (60) minute period except under the following circumstances:

1. the motor vehicle is an official City of Evanston vehicle being utilized for official City of Evanston business;
2. the motor vehicle idles while forced to remain motionless because of traffic, an official traffic control device or signal, or at the direction of a law enforcement official;
3. the motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency;
4. a police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator;
5. the motor vehicle is owned by an electric utility and is operated for electricity generation or hydraulic pressure to power equipment necessary in the restoration, repair, modification or installation of electric utility service;
6. when the motor vehicle idles due to mechanical difficulties over which the operator has no control;
7. a bus idles a maximum of fifteen (15) minutes in any sixty (60) minute period to maintain passenger comfort while non-driver passengers are on board;
8. an armored motor vehicle idles when a person remains inside the vehicle to guard the contents, or while the vehicle is being loaded or unloaded;
9. when idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions;

10. a motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection;

11. the primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.

**SECTION 2:** That the Evanston City Code, 1979, as amended, be and hereby is further amended by adding to Title 10, Chapter 4, a new section, Section 18-2, which reads as follows:

**10-4-18-2: PENALTY:** Any person who violates the provisions of Section 10-4-18-1 of this title shall be guilty of an offense punishable by a fine of one- hundred and fifty dollars (\$150.00).

**SECTION 3:** That all ordinances or parts of ordinances in conflict herewith are hereby repealed.

**SECTION 4:** That this Ordinance shall be in full force and effect from and after its passage, approval, and publication in the manner provided by law.

Introduced: \_\_\_\_\_, 2006      Approved: \_\_\_\_\_  
Adopted: \_\_\_\_\_, 2006      \_\_\_\_\_, 2006

\_\_\_\_\_  
Lorraine H. Morton, Mayor

Attest: \_\_\_\_\_ Approved as to form: \_\_\_\_\_  
Mary P. Morris, City Clerk      Corporation Counsel

## Madison Police Department

Michael C. Koval, Chief of Police  
City-County Building  
211 S. Carroll Street  
Madison, Wisconsin 53703  
Phone: (608) 266-4022  
Fax: (608) 266-4855  
police@cityofmadison.com  
[www.madisonpolice.com](http://www.madisonpolice.com)

November 9, 2017

Community Member  
1234 E Main St.  
Madison, WI 53704

Dear Community Member,

On September 5, 2017, the Common Council adopted a new City Ordinance 12.1291 "Motor Vehicle Idling":

**No person shall cause or permit the engine of any motor vehicle to operate in idle for longer than five (5) consecutive minutes while stopping, standing, or parking on any highway. Except for the following reasons:**

- (a) Idling as needed when the ambient temperature is below twenty degrees Fahrenheit or above ninety degrees Fahrenheit.**
- (b) Idling as needed to operate defrosters, heaters, air conditioners, or other equipment, to prevent a health or safety emergency, including for the purpose of providing shelter.**
- (c) Idling as needed for testing, servicing, repairing, or diagnostic purposes.**
- (d) Idling as needed to operate auxiliary equipment for which the motor vehicle was designed, other than transporting goods, including, but not limited to, operating a transportation refrigeration unit, lift, crane, pump, drill, hoist, or ready mixed concrete mixer.**
- (e) Idling as needed for traffic conditions for which the driver has no control, including, but not limited to, traffic congestion, an official traffic control device or signal, a railroad crossing while a train is passing or the crossbars are down, traffic controls in a construction zone, or at the direction of a law enforcement official.**



Appendix B

You are receiving this warning letter because your vehicle was observed in violation of this ordinance on [date and time] at [location]. Please be aware that future violations may result in the issuance of a citation with a fine amount of \$100 for the 1<sup>st</sup> offense and up to \$600 for subsequent offenses.

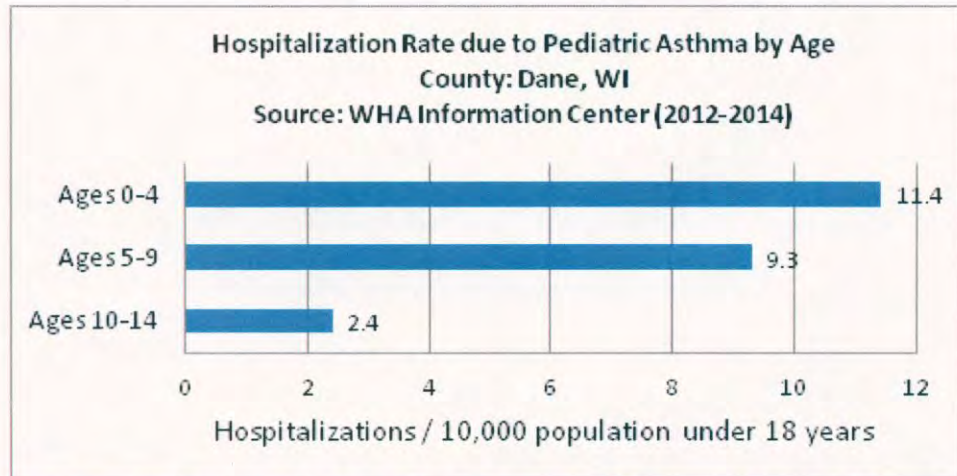
Please contact our office at 266-4622 with any questions.

Madison Police Department  
Traffic and Specialized Services

## Protect Children's Health, Save Money on Gas and Avoid a Ticket By Turning Off Your Engine

The City of Madison is working to protect health through a new idling regulation. Drivers will no longer be able to idle their vehicles for more than five consecutive minutes anywhere in the City of Madison. Evidence shows that idling vehicles increases air pollution<sup>1</sup> and can cause serious health effects especially for children. Health impacts of idling include cancer,<sup>2</sup> heart disease, lung disease, and asthma.<sup>3</sup>

Asthma has become an increasing health challenge in our community with rates of adult and childhood asthma climbing over the past 50 years. According to



**Dane County Hospitalization Rate due to Pediatric Asthma by Age Healthy**  
the University of Wisconsin Children's Hospital "Asthma is a disease of the air passages in the lungs. Various 'triggers' can lead to symptoms including coughing, wheezing, shortness of breath and tightness in the chest."<sup>4</sup>

"About one out of 10 Dane County adults and children has asthma."<sup>5</sup> Children receiving free and reduced lunch and children of color are more at risk of asthma. "The Madison Metropolitan School District reports that approximately 33% of the enrolled children with an asthma diagnosis are African American, 35% are White, and 14% are Hispanic students."<sup>6</sup> Students with free and reduced lunch are more than four times as likely to have asthma as their peers.<sup>7</sup> Also, hospitalizations for pediatric asthma in some Madison neighborhoods occur at twice the average rate in Wisconsin.<sup>8</sup> Efforts to reduce idling should reduce the impact of air pollution on children with asthma.

### The American Lung Association recommends three simple steps to reduce the health impacts of idling:

- Turn off your engine – No matter where you are – picking up your child from school or an item from the store – turn off your engine when you are stopped for more than 10 seconds.
- Reduce warm-up idling – Begin driving to warm up your car. Excessive idling will harm your engine.

<sup>1</sup> According to the Environmental Defense Fund, idling cars "can release as much pollution as a moving car". Attention drivers! Turn off your idling engines Reducing vehicle idling will cut pollution and save you money. <https://www.edf.org/climate/reports/idling>

<sup>2</sup> Teletrac. The Real Effects of Engine Idle Time. Why Businesses are Investing in GPS Software to Combat Idle Time. <http://www.teletrac.com/teletrac.com/assets/the-real-effects-of-engine-idle-time-time03.pdf>

<sup>3</sup> Burgess, Peffers, Silverman. Idling Gets You Nowhere. The Health, Environmental and Economic Impacts of Engine Idling in New York City. Environmental Defense Fund. February 2009. [https://www.edf.org/sites/default/files/9236\\_Idling\\_Nowhere\\_2009.pdf](https://www.edf.org/sites/default/files/9236_Idling_Nowhere_2009.pdf)

<sup>4</sup> UW Health American Family Children's Hospital. Facts About Asthma. <http://www.uwhealthkids.org/kids-health-and-safety/facts-about-asthma/35415>

<sup>5</sup> Ibid.

<sup>6</sup> Madison and Dane County Environmental Health Report Card Series – 2014. Air Quality. Public Health Madison and Dane County. 2014. <http://www.publichealthmdc.com/publications/documents/2014RptCardAir.pdf>

<sup>7</sup> Ibid.

<sup>8</sup> Dane County Hospitalization Rate due to Pediatric Asthma by Age Source: Community Dashboard. Healthy Dane.org <http://healthydane.org/?hcn=CommunityDashboard>

## Appendix C

- **Spread the word** – Tell your family, friends and neighbors about the benefits of reduced idling. Encourage them to help protect our children's health, save money and protect the environment by turning off their vehicles."<sup>9</sup>

### Save Money while Standing Still

- ✓ Shift to neutral while standing still. Idling at a traffic light or waiting for a train to pass is a "fuel-economy killer."<sup>10</sup>
- ✓ Shut off the engine while stopped. Hybrid vehicles use this technology, automatically shutting off the gas engine in most stopped situations. "The engineers ... know the fuel-saving value of shutting off an engine."<sup>11</sup>



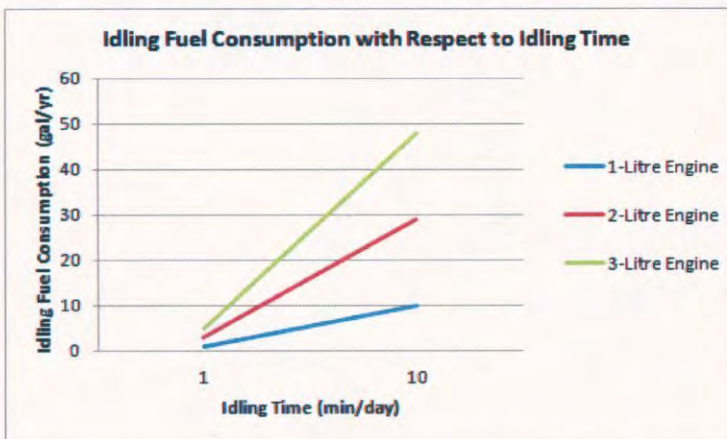
### New Strategies for Cold Weather

Wisconsin drivers know that winter temperatures can spell trouble. However, the common practice of idling a car to warm it up may harm modern engines.<sup>12</sup> According to Popular Mechanics, idling in winter "does not

prolong the life of your engine; in fact, it decreases it by stripping oil away from the engine's cylinders and pistons."<sup>13</sup> Idling increases wear and tear on diesel engines too.<sup>14</sup>

In extremely cold conditions, Popular Mechanics recommends drivers:

- ✓ Take it nice and easy for the first part of your drive, allowing your engine to warm up over the first 5-15 minutes of the drive.
- ✓ Dress warm, brave the cold and get the car moving.



- ✓ Remember the engine will warm up faster being driven.
- ✓ Save fuel and wear and tear on your engine by skipping the wintertime idle.<sup>15</sup>

The Department of Energy's Argonne National Laboratory found that a 5 minute warm up increased fuel consumption by 7-14%.

### City of Madison New Idling Restrictions

Idling in your vehicle for more than 5 consecutive minutes on public roadways is now subject to a fine of \$100 for the first offense. In addition, idling for more than 5 consecutive minutes on private roadways is subject to a fine of \$187.

Help us keep the air clean and protect kids' health by turning off your vehicle.

[engine/](#)

<sup>14</sup> Check your owners manual for recommended warm-up for modern diesel engines. Most manufacturers recommend no more than a three minute warm-up. Diesel Idling Facts and Myths. Indiana.gov <http://www.in.gov/idem/prevention/2372.htm>

<sup>15</sup> Jay Bennet. Warming Up Your Car in the Cold Just Harms the Engine. The long-held notion that you should let your car idle in the cold is only true for carbureted engines. Popular Mechanics January 22, 2016. <http://www.popularmechanics.com/cars/a19086/warming-up-your-car-in-the-cold-just-harms-engine/>

### **Anti-Idling drawbacks for municipal equipment.**

1. Selective catalytic reduction or SCR (an exhaust after-treatment system on 2010 and newer heavy duty trucks and equipment) is not effective at reducing diesel engine emissions when exhaust temperatures drop below 482 degrees Fahrenheit. Due to the duty cycle of municipal equipment, Keeping the engines running and exhaust temp up actually helps reduce emissions.
2. Due to the duty cycle of municipal equipment, battery charging systems on these vehicles need run time to recharge starting batteries and maintain the electrical system, especially with the large amounts of systems and accessories the vehicles are equipped with. The starting systems on these types of equipment would also suffer from additional wear and tear from both increased starting and starting when battery charges are depleted.
3. Some of the salt spreader control systems take a few moments to boot up. Shutting the vehicle down would mean extra time to complete snow and ice control.
4. Not maintaining engine temperatures when snow is falling effects the windshield defroster ability to keep the window clear of fogging and snow. Having a negative effect on visibility.
5. The hydraulic systems on municipal equipment run within a defined range of temperatures. These systems use the vehicle cooling system to heat and cool the hydraulics as needed. Not keeping the equipment running can cause the systems to run either to hot or to cold, affecting vehicle performance and longevity.
6. Water system on both the street sweeping and sewer jetting trucks need to run in recirculate mode when not use when temperature drop below 32 degrees to avoid freezing up. Severe pump and system damage can occur if this is not done.

*D. Tuffe*



## City of Eau Claire Anti-Idle Policy

The Anti-Idle Policy seeks to reduce use of fuel, wear on parts, and exhaust emissions. Idling is defined as: an engine running while its vehicle is at rest or not in use. Benefits of this policy include cleaner air and less fleet-related expenditures. The Anti-Idle guidelines are listed below:

- This policy applies within and outside City limits.
- It covers all City vehicles owned or leased and equipment utilizing an internal combustion engine (referred to herein as motorized). Rental or personal vehicles are included when used for and during work purposes.
- Motorized vehicles or motorized equipment shall not be permitted to idle within 100 feet of a building's fresh air intake.
- Motor vehicles or motorized equipment shall not be permitted to idle unnecessarily, or stand unattended without first stopping the engine, locking the ignition and removing the key, except in the following cases:
  - o Start up or cool down periods of turbo charged diesel engines shall not exceed 3 minutes warm-up and 5 minutes cool down.
  - o Vehicle idle time may not exceed 10 minutes in any 60-minute time frame in weather conditions of less than 32 degrees for the purpose of engine heating.

### **Exemptions to the Anti-idle Policy guidelines include.**

- Emergency or Law Enforcement operations, but Standard Operating Guidelines shall be followed,
- Operations requiring Power Take-Off or work functions involving Vehicle-Powered Auxiliary Equipment,
- Traffic conditions,
- Mechanical difficulties,
- Ensuring the safety or health of operators or passengers,
- Service or Repair.

Adopted/Approved:

*Mike Huggins*

Mike Huggins, City Manager

08.17.2011

Date