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Resolution to Recommend an Idling Ordinance to City Council  
 The attached resolution refers the draft Idling Ordinance to City Council and recommends that City Council take appropriate steps to adopt the ordinance.

The intended goal of this Ordinance is to reduce unnecessary idling from internal combustion engines of all types when not “doing work.” Many exemptions are allowed that recognize the need for some idling. The ordinance is based on recommendations for the Environmental Protection Agency (EPA) and other model ordinances. Idling Ordinances have been adopted by many states and cities.

Unnecessary idling is an avoidable practice that occurs mostly out of habit. Situations in which unnecessary idling may occur include warming up a vehicle, dropping off or picking up children at school, loading or unloading cargo, pulling over to take a cell phone call, or waiting in line at a drive-thru window. Unnecessary idling produces little or no discernable benefits, and it releases harmful pollutants into the air, consumes fuel, and causes added wear and tear on vehicle components.

Idling can strongly influence outdoor air quality at the local or community level. Unnecessary idling impacts human health, contributes to environmental degradation, and consumes natural and economic resources. Specific environmental and economic impacts are elaborated on below.

**Health and Environmental Impacts**

Unnecessary idling of motor vehicles contributes to general environmental degradation by emitting volatile organic compounds (VOCs), carbon monoxide, particulate matter, nitrogen oxides (NOx) and greenhouse gases. These pollutants affect the health and welfare of citizens on a local scale, and

contribute to regional and global pollution concerns as well. Some specific consequences are as follows:

- Gasoline motor vehicles and engines emit many pollutants classified as hazardous air pollutants by the Clean Air Act, including benzene, 1-3 butadiene and formaldehyde. Recent studies have shown elevated levels of benzene at schools.
- Gasoline motor vehicles and engines are a significant source of carbon monoxide, which affects oxygen intake and at moderate concentrations can result in angina, impaired vision and reduced brain function.
- Short-term inhalation exposure to diesel exhaust can cause respiratory irritation and inflammatory symptoms, while long term exposure likely poses a lung cancer hazard to humans, as well as contributing to other lung damage.
- Short-term exposure to nitrogen dioxide (NO<sub>2</sub>) is linked to adverse respiratory effects including inflammation in healthy people, and increased respiratory symptoms in people with asthma
- Carbon dioxide and particulate matter soot are greenhouse gases contributing to global climate change.
- Ground-level ozone, formed by the interaction of NO<sub>x</sub> and VOCs in the presence of sunlight, impacts plants and ecosystems. It makes sensitive plants more susceptible to disease, insects, and other stresses, and damages the leaves of trees and other urban plants, adversely impacting their appearance and function.
- NO<sub>x</sub> and other pollutants emitted in vehicle exhaust contribute to acid rain formation.

Children are especially vulnerable to vehicle exhaust because their lungs are still in the development stage, they breathe on average 50% more air per pound of body weight than adults, they have a higher breathing rate than adults relative to their body weight and lung surface area, and they have narrower airways than adults. Numerous studies have shown that children's asthma symptoms increase as a result of exposure to car exhaust. Given the vulnerability of children to vehicle exhaust, idling by school buses and passenger vehicles outside schools is a serious concern. A study in Connecticut determined levels of fine particulate matter around a school during school days was close to three times higher than the average daily levels for outdoor air in the surrounding community.

## **Economic Impacts**

- Idling wastes fuel. An idling vehicle gets the worst fuel economy: zero miles per gallon. According to the U.S. EPA, it is more fuel efficient to turn off the engine and restart it if the vehicle will be idling for more than 30 seconds. The wear on components from restarting the engine adds only \$10/year to the cost of driving - money that is easily recovered through improved fuel economy.
- Idling to warm up a vehicle in cold weather wastes additional fuel and emits pollutants. According to the U.S. Department of Energy, current vehicles need no to warm up for no more than 30 seconds on a winter day. The National Public Radio (NPR) Car Talk program's "Guide to Better Fuel Economy" suggests driving a car gently for the first few minutes is the best possible warm-up because it warms all of the vehicle components including the wheel bearings, tires, and suspension system, rather than just the engine. Idling for up to a minute in cold temperatures may be necessary for some older vehicles.
- Idling increases wear and tear on vehicle components, often resulting in costly repairs.

Common vehicle problems include oil contamination due to residue build-up on the cylinders, corrosion caused by excessive condensation collected in the exhaust system, and decreased peak engine operating temperature due to spark plug residue.

Based on over 400,000 passenger vehicle trips per day in the area, the collective effects of small amounts of idling have large effects.

The resolution was passed unanimously by the Environmental Commission on February 24, 2011. Commissioners present - Rita Loch Caruso, Christopher Graham, John Koupal, Gwen Nystuen, David Stead, Valerie Strassberg, Margie Teall, Kirk Westphal

Prepared By: Environmental Commission

Whereas, The City of Ann Arbor is committed to providing city services in a sustainable fashion;

Whereas, City Council adopted 10 environmental goals including Clean Air; Health-promoting Urban Environment; Stable Climate; and Viable Ecosystems;

Whereas, The Southeast Michigan region, including Washtenaw County and Ann Arbor, have been designated as a Moderate Non-attainment Area for ground-level ozone under the 8-hour ground-level ozone National Ambient Air Quality Standard;

Whereas, In the past three years the Washtenaw County ozone monitoring station has recorded 8 days with ground-level ozone levels considered "Unhealthy for Sensitive Groups" or with ground-level ozone levels considered "Unhealthy" for the general population;

Whereas, Motor vehicles and internal combustion engines are an important contributor to various types of air pollution, hazardous air pollutants, carbon monoxide, ground-level ozone precursors, and fine particles (PM 2.5);

Whereas, Exposure to internal combustion engine exhaust is known to contribute to pulmonary diseases, particularly for sensitive populations; including asthma, lung cancer, bronchitis, acute respiratory infections, and emphysema;

Whereas, The rates of asthma in Washtenaw County exceed the asthma rates in the State of Michigan and the United States; with asthma rates especially elevated the Ann Arbor zip codes of 48103, 48104 and 48105;

Whereas, Other government bodies have effectively implemented engine idling reduction ordinances including the states of California, Connecticut, Hawaii, Maryland, Massachusetts, Nevada, New Hampshire, New York, New Jersey, and Virginia, and the Cities of Washington DC, Philadelphia, Houston, St. Louis and others;

Whereas, The Ann Arbor Public Schools already have an anti-idling policy in place for school busses;

Whereas, Unnecessary idling of internal combustion engines wastes a significant amount of non-renewable energy resources;

Whereas, The City of Ann Arbor has recognized the need to reduce the negative impacts of fuel use on air quality and public health in the Ann Arbor area, as evidenced by the Clean Cities program commitment to alternative fuel vehicles and alternative fuel use in the region and the Green Fleets

Policy to reduce gasoline and diesel fuel use; and

Whereas, City Council recommended that an ordinance be developed to address idling;

RESOLVED, That the Environmental Commission recommends that City Council adopt the draft idling ordinance, take appropriate steps to educate the public about the negative effects of unnecessary idling on public health and non-renewable energy use, and take appropriate actions to measure the effectiveness of this ordinance.