

Vermont House of Representatives  
Committee on Natural Resources and Energy  
Testimony by Jim Flint  
Executive Director, Friends of Burlington Gardens  
January 20, 2010

Good afternoon and thank you for the opportunity to testify in support of H97, a bill to limit the idling of motor vehicles with a gross rating of more than 10,000 pounds. My name is Jim Flint. I serve as executive director for Friends of Burlington Gardens - a nonprofit that supports a network of more than 180 school, community, and neighborhood gardens across Vermont. The gardens collectively serve an estimated 10,000 Vermonters of diverse ages, abilities, and cultural backgrounds. A majority of community gardeners are in the low to moderate income range and depend on their vegetable gardens as a vital source of fresh, affordable, and nutritious food.

Because of the impact of air pollution on the health of plants and people, Friends of Burlington Gardens is a member of the Vermont Coalition to Reduce Vehicle Idling. Members of the Coalition support H97 and have pledged to work together to reduce the air pollution caused by the unnecessary idling of motor vehicles. The Coalition's work involves education, outreach, and policy advocacy. Coalition members include Idle Free Vermont, the American Lung Association of Vermont, the Vermont Clean Cities Coalition, the Vermont Natural Resources Council, the Vermont Chapter of the Sierra Club, and Green Mountain Coffee Roasters.

As a gardener, I pay close attention to the weather and sky conditions. In recent years, I've noticed that skies over the Champlain Valley are more frequently filled with haze, which is composed of fine particulate matter, soot, and dust. The fine particulates irritate lungs and contribute to heart disease and cancer. Air pollution increases human exposure to harmful chemical compounds, including benzene, which enter the bloodstream through the nose, mouth, skin, and digestive tract.

For farmers and gardeners, who spend a great deal of time outdoors, air pollution from motor vehicles can become a significant health hazard. At community and school garden sites located in neighborhoods, on town greens, and on school grounds, exhaust fumes from idling vehicles can turn an otherwise healthy and community-building activity into an unhealthy situation. In yards and gardens located near areas of frequent vehicle idling, fine particulates settle out on the leafy surfaces of plants, and on leaves that go into compost. Over time, these chemical air pollutants can contaminate the soil and water, and be absorbed by the roots of vegetable crops.

The 2010 draft report, “Keeping our Air Clean,” by the Chittenden County Metropolitan Planning Organization, identifies the primary source of air pollutants in Vermont as motor vehicle emissions. The report urges Vermonters to reduce emissions by driving less miles and by reducing unnecessary idling, so that we can all breathe easier.

Vehicle emissions give rise to Ozone, which is the main component of smog. As a pollutant, Ozone is formed when airborne hydrocarbons chemically react with nitrogen oxide emissions. Ozone is the major cause of air pollution injury to the foliage of vegetable crops, resulting annually in several billion dollars of economic losses across the U.S. The crop damage begins at an ozone level of 70 parts per billion, just under the EPA threshold for polluted air and close to the levels of air pollution experienced in Vermont, particularly in Chittenden County.

In China, studies have shown that heavy regional haze in key agricultural areas may be cutting food production there by as much as one-third. The haze scatters and absorbs solar radiation, reducing the amount of sunlight reaching crops, which decreases plant growth and food production. With Vermont’s short growing season, our local farmers can ill afford reductions in sunlight due to manmade haze. Reducing unnecessary idling of motor vehicles is a positive step for agriculture.

In Vermont, new community gardens are springing up in neighborhoods and on school grounds. In addition to food production, the gardens offer opportunities for education, recreation, and social interactions. But although community and school gardens requires low fossil fuel inputs and produce healthy food -- the health of the gardeners growing the food is impacted by air pollution.

Because of lower average body mass and lung capacity, exposure to vehicle exhaust has the greatest health impact on children and women. Studies have also documented that increased levels of air pollutants are often accompanied by an increase in aggressive behavior (e.g. road rage), a decrease in helping behavior and altruism, and a lessened sense of well being. By inhibiting lung function, air pollution reduces the ability and desire of people of all ages to engage in healthy outdoor activities, which leads to less exercise and higher health care costs for society.

Among the compounds emitted by motor vehicles, Polycyclic aromatic hydrocarbons (PAHs) are suspected carcinogens. The PAHs originate from vehicle exhaust, especially diesel, and become attached to dust and pollen particles in the air. PAHs enter the body through the lungs and can last in the environment for years. Reducing the unnecessary idling of trucks in neighborhoods, and at businesses, will decrease ground level air pollution and help reduce human exposure to PAHs.

Across the country, asthma rates have increased steadily in recent years. In 2007, nearly 10% of Vermonters were living with asthma, with the incidence of asthma highest among children in low income situations. Asthma is directly linked to indoor and outdoor air pollution, with diesel emissions being particularly harmful. If levels of vehicle emissions and air pollution continue to increase, there will be an increased number of unhealthy air days when Vermont children, youths, and adults are unable to exercise outdoors without aggravating their lungs.

In 2007, the Vermont legislature recognized the impact of diesel exhaust fumes on school children and passed ACT 48--An Act Relating to the Idling of Motor Vehicle Engines on School Property. In a similar manner, the Vermont legislature has an opportunity this year to take action to conserve fuel, protect public health, and reduce the environmental impact of air pollution by passing H97 and limiting the unnecessary idling of heavy trucks. I urge the legislature to vote to approve this bill.

Respectively submitted by

Jim Flint, Executive Director

Friends of Burlington Gardens  
180 Flynn Avenue Studio 3  
PO Box 4504  
Burlington, VT 0540-4504  
802-861-4769  
[jimf@burlingtongardens.org](mailto:jimf@burlingtongardens.org)

Information Sources:

“Air Pollution Injury in Vegetable Crops,” by Gordon Johnson, July 10, 2008  
<http://agdev.anr.udel.edu/weeklucropupdate/?p=304>

“Air Pollution Effects on Vegetables,” by Gerald E. Brust, May, 2007;  
<http://mdvegetables.umd.edu/images/Air%20Pollution%20and%20Vegetables.pdf>

“Asthma: Statistics that May Take your Breath Away,” by Laura Kiesel, Vermont Woman, November, 2009; <http://www.vermontwoman.com/articles/1109/asthma.shtml>

“Automotive Exhaust Chemicals: disease causing effects,”  
<http://www.nutrained.com/environment/carschemicals.htm>

“Case study of the effects of atmospheric aerosols and regional haze on agriculture: An opportunity to enhance crop yields in China through emission controls?”  
Proceedings of the National Academy of Sciences, November 23, 1999;  
<http://www.pnas.org/content/96/24/13626.full>

“Keeping our Air Clean,” by Chittenden County Metropolitan Planning Organization, December 2009; [http://www.ccmppo.us/library/airquality/Keeping\\_Our\\_Air\\_Clean\\_DRAFT\\_200912.pdf](http://www.ccmppo.us/library/airquality/Keeping_Our_Air_Clean_DRAFT_200912.pdf)