

Domestic Power Tool Feedback to Sebastopol City Council Members

1. Introduction

I was surprised to learn on May 17th that the format of our semimonthly City Council meetings is not a **conversation** between the public and the Council members on agenda items. Dialogue is an essential element of effective communication. I am particularly concerned about the amount of misinformation presented that can't be challenged or corrected in this setting. Thus, I'd like to briefly re-address some of the primary considerations around leaf blower use.

2. Clarifications

During public testimony I heard about a proposal that residents may continue to use leaf blowers as they have in the past. **However**, this proposal actually **bans** residential leaf blower use on Sundays and holidays, **bans** gas-powered leaf blowers manufactured before 2005, and **restricts** hours of use to 10am to 4pm, Monday to Saturday.

I also heard that at least one whole US State, Hawaii, banned gas operated leaf blowers in 2010, and currently has a bill to ban them all. **However**, I read that Hawaii enacted SB466 last summer, a state law that **restricts** the use of leaf blowers only in **residential** areas to 8am to 6pm, 9am-6pm on Sundays and holidays, and prohibits blowing debris onto neighboring property or public rights-of-way. Hawaii lawmakers and Honolulu officials are currently **debating gas leaf blower bans** given Hawaii's warm climate and open living environment.

These discrepancies concern me.

3. Noise Pollution

Amending our Noise Ordinance to allow the use of Domestic Power Tools (DPTs) and providing our Police with enforcement tools and training should address most noise concerns. Time of day, noise level, and noise duration are important variables. I suggest that the Council consider all reasonable use of DPTs, including chain saws that could produce 110dBA intermittently for hours.

Gas powered blowers have an **adjustable** throttle by design. The **Professional Landcare Network** (PLANET) recommends that generally speaking, **leaf blowers should be run at half throttle most of the time**. More details at their website:
<http://www.landcarenetwork.org/legislative/position/leafblowers.cfm>

Vacuums and blowers can both be noisy due to their design similarities. An electric motor or engine directly drives an impeller or fan, and a hose is attached to the input or output of the housing. This is why some tools can be designed to perform both tasks.

4. Air Pollution

The State of the Air (SOTA) 2010 Report was compiled by the American Lung Association. **Sonoma County received an A grade for ozone pollution, and a B grade for high particle pollution days**. Santa Clara, Contra Costa and Solano counties face greater air quality challenges with **F grades for both ozone and particle pollution**. **On-road mobile sources** represent the largest source of emissions that contribute to ozone and particulate matter (PM) formation. **Residential wood burning** contributes to elevated wintertime PM levels.

Sebastopol is within the North Counties reporting zone of the Bay Area Air Quality Management District (BAAQMD). BAAQMD's Spare the Air Program reports that most of the air

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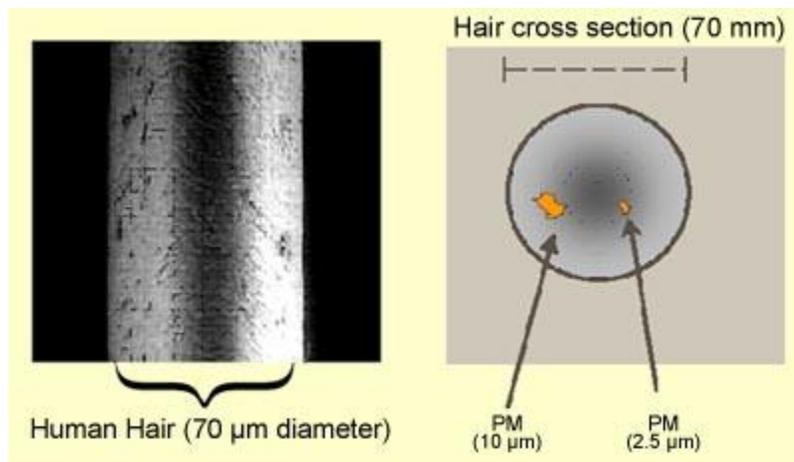
pollution in the Bay Area is man-made. Overall, mobile sources - **particularly cars and light duty trucks** - contribute **75 percent** of the summer air pollution. Emissions of PM from diesel engines are especially harmful, and listed as a toxic air contaminant by CA.

The CA Air Resources Board (CARB) conducted a yearlong study entitled ***A Report to the California Legislature on the Potential Health and Environment Impacts of Leaf Blowers (February 2000)***. CARB wrote, "This report makes ***no recommendations for alternatives***. Based on the lack of available data, such conclusions are premature at this time... Banning or restricting the use of leaf blowers would reduce fugitive dust emissions, but there are ***no data on fugitive dust emissions from alternatives***, such as vacuums, brooms, and rakes. In addition, without a more complete analysis of potential health impacts, costs and benefits of leaf blower use, and potential health impacts of alternatives, such ***a recommendation is not warranted.***"

PLANET reports that standards that were put in place by CARB for 1995 have been met, and in most cases, exceeded by all leaf blowers sold here today. They conclude that actual emissions from gas powered leaf blowers are few because of the equipment's intermittent use.

a. PM2.5

Particulate matter (PM) is the chief wintertime air quality concern. PM2.5 is fine ***microscopic*** particles suspended in the air that are less than 2.5 microns in size, and can stay in the air for days or weeks and may travel hundreds of miles. PM2.5 is a more serious health concern than PM10, since smaller particles can travel more deeply into our lungs. **PM2.5 particles are produced by any kind of combustion (motor vehicles, wood burning, power plants, etc.) and some industrial processes.**



The BAAQMD bans wood burning during Winter Spare the Air Alerts when PM pollution is expected to be unhealthy. ***The largest single source of wintertime PM2.5 is wood burning, followed by ammonium nitrate and motor vehicles.***

Vacuums, blowers, rakes and brooms move leaves, debris and PM. A casual observer ***cannot see*** the amount of potentially harmful airborne PM. Many indoor vacuum cleaners have High Efficiency Particulate Air (HEPA) filters that trap PM such as pollen and dust mite feces which could trigger allergy and asthma symptoms. Outdoor

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tools with woven containment bags do **not** trap PM. Thus, vacuuming is not likely to reduce any PM2.5 concerns, and may in fact help launch fine particles into the air.

A scientific study to quantify PM emission rates was performed at UC Riverside entitled ***Particulate Matter Emissions Factors and Emissions Inventory from Leaf Blowers in Use in the San Joaquin Valley (2006)***.” The study found little difference between vacuuming and blowing, and in some cases vacuuming was worse. It also found that ***sweeping concrete with a broom created significant PM emissions***.

b. PM10

PM10 refers to coarse particles that are 2.6 to 10 microns in size. They can remain in the air for minutes or hours and travel as little as a hundred yards or as much as 30 miles. PM10 is not as serious a health concern as PM2.5.

c. Ozone (colorless engine exhaust)

Ground-level ozone (smog) is the major summertime cause of poor air quality in the Bay Area. The Spare the Air Every Day program was created to reduce summertime ozone pollution. Ozone is primarily attributed to exhaust from combustion engines, such as those that power cars, trucks, trains, boats, construction equipment, lawn mowers, and other mobile sources.

d. Leaves and Debris

The smallest particle visible to the naked eye is about the thickness of fine hair. Visible leaf blower debris is **not** Particulate Matter, and quickly falls to the ground due to its size and weight. Under normal operating conditions, most debris falls within several feet of a leaf blower nozzle. There is virtually no air flow 20 feet away from a leaf blower nozzle.

5. Conclusions and Recommendations

I have not found credible evidence that there is a serious air quality problem in Sebastopol, or that leaf blowers are causing a serious air quality problem here. In fact, our air quality is generally very good according to SOTA 2010.

Our unrealistic Noise Ordinance and efforts to ban or restrict leaf blowers have combined to create community tension, polarization, and a dilemma for leaf blower owners. Those that want to upgrade their equipment to quieter, less-polluting models are uncertain about future City legislation. A responsible landscape maintenance owner who works in my neighborhood recently purchased an expensive leaf blower. Please consider the financial risk this small business owner is taking in this town with pending legislation!

Please also consider the conclusion of PLANET that ***electric powered leaf blowers are not an acceptable substitute*** for gas-powered machines due to their lower efficiency and increased safety hazard.