Mechanical Blower Bans:
Manhattan Beach History & Alternatives

Prepared by City of Manhattan Beach Staff

Across the U.S., hundreds of cities and counties have passed laws restricting or banning the use of mechanized leaf blowers. Leaf blower bans aim to improve noise and air pollution from both emissions and dust particles. These ordinances vary and include:

- Complete Gas Blower Bans
- Complete Gas and Electric Blower Bans
- Noise and/or Time of Day, or Day of the Week Restrictions

Manhattan Beach has had a complete gas and electric leaf blower ban since 1998. Other coastal cities in California with a complete mechanical blower ban include Hermosa Beach, Santa Monica, Laguna Beach, and Del Mar.

Leaf Blower History in Manhattan Beach:

In October 1998, City Council approved Municipal Code 5.48.330. Mechanical blower shall refer to a portable device which is used, designed or operated to produce a current of air by mechanical, electrical or other means to push, propel or blow dirt, dust, leaves, grass clippings, trimmings, cuttings, refuse or debris. Use of mechanical blowers for any purpose shall be prohibited. Violation of this section shall be punishable as described in Chapter 1.04 of this Code. (§ 6, Ord. 1957, eff. December 5, 1996, as amended by § 2, Ord. 1986, eff. October 15, 1998, and § 1, Ord. 2153, eff. October 20, 2011)

In September 2011, City Council approved an Ordinance Amending Municipal Code Section 5.48.330 Regulating Leaf Blowers and Section 1.04.010 to Allow Violations of the Municipal Code to Be Charged as Either Misdemeanors or Infractions, Ordinance No. 2153. This made operation of a leaf blower a misdemeanor and Section 1.04.010 to allow violations of the Municipal Code to be prosecuted as either a misdemeanor or an infraction.

Alternatives to Mechanical Blowers:

- **Electric Leaf Suckers/Vacuums** – less fumes and ear-blasting noise, come equipped with a vacuum feature designed to reduce the dust and other particulates stirred up during outdoor cleanup. Vacuuming is also significantly more efficient than blowing, because it prevents debris from being blown back onto surrounding areas. You can suck up the leaves, then either compost them or put them out for community pick up. While not completely silent, electric engines can be quieter than gas powered leaf blowers, but they can still contribute to air pollution through suspended dust particles.
- **Push Power or Lawn Sweeper**- Lightweight and human-powered leaf collectors look like lawnmowers and are used in roughly the same way. With a pass over the yard, the collector's combs scoop up the leaves and deposit them in the machine's attached bag. The whole process is quiet and emissions-free. A lawn sweeper looks a little like a push mower, but instead of blades to cut grass it uses height-adjustable brushes to sweep leaves up into an attached collection bag. Some manufacturers claim that sweepers are ten times faster than rakes at cleaning up leaves. Dust particle suspension depends on the surface the sweeper is used on.
- **Mulching mower** –Battery-powered electric mower that has a mulching option on it, where you can mow over the leaves on a lawn the same way you would if you were mowing the grass. If you mulch the leaves finely, you can scatter them under bushes and trees for groundcover.

Otherwise, compost them or bag them for pick up. There are likely noise and suspension concerns with this method, depending on the type of mower used.

- **Rakes and Brooms** – Rakes were the first tools used to clean up leaves, and they're still the most environmentally-friendly. Zero pollution and little noise. Leaves are so light, they can easily be swept into a pile. Rakes work much better on grass and around trees and bushes. Brooms can contribute to dust particle suspension depending on the surface it is used on.

Per Council Request: Looking into allowing electric-only leaf blowers

The California Air Resources Board (CARB) 2000 study *A Report to the California Legislature on the Potential Health and Environmental Impacts of Leaf Blowers* identifies three potential hazards from the use of leaf blowers: exhaust emissions, dust emissions, and noise.

1. Exhaust Emissions: Gasoline-powered leaf blowers are currently available that meet the USEPA and CARB thresholds for exhaust emissions and operate at or below 65 decibels. However, gas-powered leaf blowers still emit specific pollutants the State of California has identified as of concern: hydrocarbons from both burned and unburned fuel, which combine with other gases to form ozone; carbon monoxide; and toxic contaminants such as benzene, 1,3-butadiene, acetaldehyde and formaldehyde (CARB 2000). ***Electric-powered models that are exhaust-free are available.***
2. Dust Emissions: Epidemiological studies have long recognized the harm particles — including hydrocarbons from gasoline, animal droppings, spores, fungi, pollens, pesticides and herbicides, fertilizers, brake-lining dust and tire residue and heavy metals — cause to people's respiratory systems. About 5 pounds of particulate matter per leaf blower per hour are swept into the air and take hours to settle, according to a widely cited leaf-blower pollution report by the Orange County, California grand jury in 1999. Emission rates for leaf blowers were quantitatively measured by the College of Engineering-Center for Environmental Research and Technology, University of Riverside in a study conducted in 2006 (Fitz, D., et al. 2006). The study was designed to determine emissions from leaf blowing/vacuuming, raking and sweeping on asphalt and cement substrates. The UC Riverside study concluded (1) there was litte difference between generation of PM between leaf blowers or leaf vacuuming, (2) sweeping with a broom on concrete created significant PM emissions, (3) sweeping on asphalt did not and (4) raking leaves did not generate significant PM emissions. ***Electric-powered leaf blowers contribute to dust emissions.***
3. Noise Pollution: Persistent and escalating sources of sound can often be considered an annoyance. The Occupational Safety and Health Administration (OSHA) has published permissible exposure limits (PELs) for noise (29CFR 1910.95(a)). Early leaf blowers averaged about 78 decibels, with some machines measuring even louder. The League for the Hard of Hearing reports that noise levels above 85 decibels can harm hearing over time. Many new blowers are at or below 65 decibels (a conversation is typically around 60 decibels). For every six decibel reduction, sound intensity is actually reduced by 50 percent. That means many of today's units are four times quieter than older blowers. Typically, 67 to 69 decibels, when measured from a distance of 50 feet, is considered an acceptable noise level in most U.S cities and municipalities. ***Electric leaf blowers are generally quieter than gasoline-powered leaf blowers, but still do produce noise.***

Other Considerations:

The South Coast Air Quality Management District (SCAQMD) sponsors an annual Leaf Blower Exchange Program. Commercial landscapers and gardeners operating within the South Coast Air Basin can exchange old, high-emission, noisy backpack leaf blowers for new low-emission/low-noise backpack leaf blowers available at a discounted price. According to information posted on the SCAQMD's website 12,000 old leaf blowers have been replaced since 2006 reducing 138,729 pounds of hydrocarbon and

NOx emissions and 88,282 pounds of smog-forming pollutants per year. http://www.aqmd.gov/home/programs/community/community-detail?title=lawn-equipment#leaf%20blower

In addition, the SCAQMD has supplied trainings at the leaf blower exchanges. To reduce particulate suspension, and encourage clean-up of dust, electric-leaf blower operators learn to use the blower like a broom, rolling the debris from one area to another where it can be collected, rather than blasting it in a cloud of dust. The district helped support the development of backpack electric leaf blowers, which are now commercially available.

If Manhattan Beach were to change the ordinance and allow mechanical leaf blowers, the best alternative would be zero-emission, battery-powered electric leaf blowers, in conjunction with responsible use with dust collection, and limits on the times of use. However, there would be enforcement challenges with this approach versus enforcing a complete ban, as exists.

The City could consider additional requirements including user licenses/training, debris/dust clean up, time and day use restraints. For example, in Palo Alto, people using mechanical blowers must also have a leaf-blower license which can be acquired through taking a blower etiquette class, passing a written test, then carrying a license and buying low-noise equipment. In addition, some cities have incorporated "responsible" mechanical blower use, including one or more of these guidelines:

- Operate leaf blowers in residential areas only at reasonable hours (local ordinances vary with time limit restrictions).
- Limit the number of leaf blowers being used at once on small residential sites. This will keep the sound generated to a minimum.
- Minimize the high-pitched whine by running the blower at the lowest possible throttle speed to do the job. Lower speeds reduce sound and give the operator maximum control. Full throttle is seldom necessary.
- Use the full nozzle extension so the air stream is directed close to the ground to minimize dust.
- Pay close attention to the generation of dust. In dusty conditions, use mister attachments to slightly dampen surfaces. To clean an excessively dusty area, use a shovel to pick up the large debris and do your final cleanup with water.
- Keep debris away from neighbors' yards, the street, vehicles, people or pets. Don't use leaf blowers to move large debris piles from one spot to another.
- Clean up after using blowers. Dispose of debris in trash receptacles or haul it away.