TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER DEPARTMENT: POLICE

DATE: JUNE 13, 2005 CMR:281:05

SUBJECT: REQUEST TO PROVIDE STAFF WITH POLICY DIRECTION FOR A REVISED ORDINANCE REGULATING LEAF BLOWERS AND APPROVAL OF AMENDMENT TO PALO ALTO MUNICIPAL CODE CHAPTER 9.10 EXTENDING THE CURRENT ORDINANCE UNTIL DECEMBER 31, 2005

REPORT IN BRIEF

In 2002, the City Council amended Chapter 9.10 of the Palo Alto Municipal Code regulating leaf blowers to defer the prohibition of the use of combustion-fueled leaf blowers in residential areas from July 1, 2002 to July 1, 2005. There are a wide variety of opinions and perspectives on the issue that involve not only environmental concerns but those of economics and social justice as well. Because of the complexity of the issues, this report provides a list of options for the Council to consider regarding the regulation of leaf blowers, an update on other cities’ experiences, technology, and cost implications. Staff is recommending a continuation of the current ordinance until December 31, 2005, to provide additional time to get public feedback and to draft any potential revisions to the ordinance.
RECOMMENDATION

Staff requests Council policy direction on a revised ordinance and recommends that the City Council approve the attached amendment to Chapter 9.10 of the Palo Alto Municipal Code regulating combustion-fueled leaf blowers by extending the current ordinance until December 31, 2005.

BACKGROUND

In 1972, the City established noise standards with the adoption of Palo Alto Municipal Code Chapter 9.10. In 1986, as a result of numerous complaints about noise from equipment used by gardeners and City employees and contractors, the Police Department started to formalize its response and enforcement of the ordinance. At that time, after conducting noise meter readings on 18 different pieces of commonly used equipment, it was concluded that the noise ordinance was restrictive and needed to be reviewed for changes. In 1987, staff presented three options to Council specifically related to leaf blowers, including: 1) a ban on the use of gasoline-powered leaf blowers, 2) a prohibition on the use of gasoline leaf blowers within 250 feet of a single family residence, and 3) a prohibition on the use of a gasoline leaf blower exceeding 90 dBAs at a distance of 25 feet between 10:00 a.m. and 4:00 p.m. Monday through Saturday, and total prohibition on Sundays and holidays. The Council approved the third option with the following modifications: 82 dBAs and a further reduction to 75 dBAs after July 1, 1989, with a restriction in hours from 9:00 a.m. to 5:00 p.m. Monday through Saturday, and from 10:00 a.m. to 4:00 p.m. on Sundays and holidays.

In 1998, Council directed staff to again identify and evaluate options for addressing leaf blower noise; to review environmental issues; to provide a survey of what other jurisdictions had done regarding leaf blowers; and to provide information about the current level of enforcement and on issues related to enforcement of any proposed ordinance changes.

The following year, staff provided a list of recommendations (CMR:352:99) regarding the regulations of leaf blowers to the Policy and Services Committee. At that time, Committee members asked that staff develop an alternative to the City issuing permits; review the hours of use around hotels; review the hours City crews use blowers around residences; work with Bay Area Gardeners Association (BAGA) in certification and training efforts; and reconsider the hours for use by homeowners.

As a result, the City Council adopted a revision to the leaf blower ordinance (CMR:202:00) in 2000. A portion of the ordinance that became effective on January 1, 2001 required that all commercial operators be trained and certified on the ordinance and proper use of leaf blowers. Additionally, the ordinance allowed the use of only City-approved leaf blowers. A secondary provision of the ordinance, which was to take effect on July 1, 2002, would have prohibited the use of combustion-powered leaf blowers. Use of fuel-powered leaf blowers by any person, including residents, would
have been prohibited in residential areas after July 1, 2002. Finally, City crews would be prohibited from using fuel-powered leaf blowers in residential areas.

In 2002, the City Council again amended Chapter 9.10 of the Palo Alto Municipal Code, deferring the prohibition of the use of combustion-fueled blowers in residential areas until July 1, 2005. The amendment was based upon the belief that leaf blower manufacturers would be able to enhance technology enough to reduce the issues of noise generation and gas emissions during that time period, would potentially develop a battery-powered blower that would meet the needs of commercial gardeners and that the prohibition of leaf blowers in residential areas would result in a substantial financial impact on the City’s Community Services and Public Works Departments.

The current ordinance is due to sunset on July 1, 2005. At that time, unless Council directs otherwise, the use of gas-powered leaf blowers in residential areas by any person, (commercial gardeners, City staff and crews, and residents) will be prohibited. Due to the complexities of the issues, staff is requesting that the Council provide policy direction for a revised ordinance and in order to allow for public discussion on the potential revisions, extending the current ordinance until December 31, 2005.

**DISCUSSION**

**Environmental Issues**

There are three environmental issues associated with leaf blowers: noise levels, gas emissions and particulate matter.

*Gas Emissions* - To date, most of the requirements have dealt with the reduction of gas emissions. The Federal Environmental Protection Agency (EPA) Phase I and II standards basically require manufacturers to build cleaner engines that will not degrade and release more emissions as they age. Manufacturers are required to conduct in-house testing of engines to prove that the engine’s performance meets the standards. In essence, EPA is encouraging engine manufacturers to design new and improved uses of automotive-style overhead-valve (OHV) technology in non-hand-held engines. EPA's hope is to reduce emissions, as well as improve durability and fuel economy.

The California Air Resource Board (CARB) submitted a report in January 1999 to the State Legislature that summarized the potential health and environmental impacts of leaf blowers and also provide recommendations for alternatives to their use and/or development of additional standards to which manufacturers are to adhere when developing new equipment. CARB recommended that manufacturers develop technologies that would ultimately reduce the amount of fuel delivered to the combustion chamber for four and two stroke engines.
CARB’s phased approach is a three-tier plan to reduce gas emissions from engines in the 20 to 50 cc displacement range. Tier I, which ran from 1995 to 1999, permitted 230 grams of emissions per kilowatt. Tier II, which ran from 2000 until this year, reduced the grams per emission to 72. Tier III, which started this year, requires emissions to be reduced to 50 g/Kwh. Attachment A lists those manufactures that presently produce 2005 Tier III engines as listed by the CARB.

Particulate Matter - There has been a great deal of research done by the CARB and the American Lung Association of California regarding the issue of particulate matter. Air pollution levels in California have improved tremendously within the last few decades due to the aggressive controls on vehicle industry and power tool manufacturers. However, CARB and the American Lung Association believe Californians are still being exposed to a significant amount of particulate matter from a wide variety sources.

CARB and the American Lung Association of California report particulate air pollution contributes to cardiac illnesses, respiratory illnesses and cancer. The number of premature deaths linked to particulate matter generated from a wide variety of sources are comparable to deaths from traffic accidents and second-hand smoke. Hospital admissions, emergency room visits and asthma attacks have increased over the years and population-based studies have linked particulate matter as the cause. While particulate matter is still being researched, specific regulations and and/or recommendations have not yet been developed by CARB or the EPA.

Noise - While the technology is slowly improving in this area, significant progress still remains to be made. Over the last 20 years, noise levels of blowers have decreased from 90 decibels (dBA) to today’s standard of 65 dBA. One manufacturer has developed a blower that is rated at 60 dBA.

In 2002, staff determined that the Los Angeles Department of Water and Power was aggressively worked towards developing a portable electric leaf blower that would be suitable for use by commercial gardeners. In 1998, they contracted with AeroVironment, Inc., which specializes in new technology development, to assist in prototyping and designing a new leaf blower. Last December, the Los Angeles Department of Water and Power contracted Giltronics Associates, Inc., to make the transition from prototype to mass production of leaf blowers.

The new leaf blower requires no power cord, weighs approximately 10 pounds less than a gas-powered blower and is less than 65 dBA. According to the specifications, the energy source is a nickel metal hydride battery pack that operates for approximately 45 minutes at 344 cubic feet per minute. Currently, the Los Angeles Department of Water and Power has solicited interested manufacturers through a “Request for Proposal” process, which ended April 22, 2005.

Battery-operated leaf blowers being produced by most manufacturers, however, have their own problems associated with the handling and disposing of batteries, excessive weight, and poor performance compared to gas-powered models. There are battery-operated hedge clippers and light duty string trimmer models, and within five to ten years, technological advances may make this
power source feasible for leaf blowers as well. Manufacturers have not yet developed a model that is compatible for commercial use.

Staff has recently conducted some sound meter readings of Hasquavane, Stihl, and Toro gas-powered and electric leaf blowers. All the readings were taken at 50 feet from the source. The two-stroke gas-powered leaf blower’s reading was 77-78 dBA, while the four-stroke engine gas-powered leaf blower’s readings were 66 dBA. The electric leaf blowers had a higher pitched sound and the readings were 71 dBA. It should be noted the local ambient was 60 dBA when the readings were taken, which would normally raise the meter readings of the equipment.

Alternative Clean-up Tools

Staff investigated the different types of tools that are used for clean up purposes and compared the time it takes to do the work to the time doing the same work using a gas-powered leaf blower.

Rakes/Brooms – The most commonly used tools for clean up of yards, open spaces, grounds, etc., are rakes and brooms. Obviously, brooms are the quietest and result in the least amount of pollution (although some minimal pollution occurs when dust particles become disturbed during sweeping and raking). Brooms, however, can only be used on certain types of flat, smooth surfaces such as asphalt and concrete that are amenable to sweeping.

The time it takes to sweep an area is considerably longer than the time it takes using a blower. Depending upon the reference source, the time differences range from three to five times longer. According to industry standards published by the California Landscape Contractors’ Association, a nonprofit organization that represents approximately 2,500 State-licensed landscapers, there is an average ratio of one hour of labor using a leaf blower compared to five hours for sweeping. The Bay Area Gardener’s Association informed staff that on average it takes its members approximately two hours to complete a raking and sweeping job that would otherwise take one hour using a leaf blower.

Another tool that is frequently used is rakes. They produce some noise when used on hard surfaces. A metal rake on concrete can generate 58-60 dBAs at 50 feet. The associated time for clean-up using rakes is about the same as it is for brooms.

Electric Leaf Blowers – While electric leaf blowers are now as powerful as gas-powered blowers, they present substantial hazards to the users, and produce as much, if not more noise and disburse as much particulate matter as gas-powered blowers. There are issues of the unavailability of electric outlets; the inherent dangers of using extension cords at a job site where other power gardening equipment is concurrently being used or in an area that is wet, creating potential electrocution hazards; and the impracticable nature of using lengthy electrical cords on large parcels. Additionally, a common practice of using gas-powered generators to power electric leaf blowers
creates substantial noise issues, not to mention even greater gas emissions that gas-powered blowers.

Many of the electric product manufacturers do not furnish dBA ratings. Those that do range from 64 dBA to 69 dBA. A lot depends on the power of the blower itself. The more power, the louder the motor noise and the noise of the air flow coming out of the tube.

Water – Water has been used in the past in many places to rid hard surfaces of debris. In non-drought years, hoses are frequently used in residential areas to clean driveways and sidewalks. Some cities, including Palo Alto, use power washers to clean their commercial areas. This equipment generates noise levels that are as loud as or louder than leaf blowers. While the use of water usually does not create air pollution problems, water is a scarce resource that should not be wasted, especially during drought years. This method creates the situation where particular matter is washed into the Bay, which could be considered unhealthy to the environment.

Other Tools – The Green Machine has been a useful tool in helping to maintain cleanliness in Palo Alto’s downtown area but it has it limitations. Cement tire stops in parking lots, tree wells, and other obstacles prevent its use in certain areas and restrict its ability to pick up debris in certain areas.

Other Cities’ Experience

Cities develop regulations according to their own specific needs and factors such as amount of commercial and open space areas located within their jurisdiction, the level of cleanliness their community demands, and the amount of expenditures they determine acceptable for ensuring compliance to the regulations. Some cities do not regulate the use of leaf blowers at all.

While a number of cities have banned leaf blowers, staff has determined that the enforcement ranges from minimal to none at all. Many cities in Southern California have banned the blowers. However, there is minimal enforcement due to the lack of resources available to conduct enforcement. Many manufacturers mentioned the sales of gas-powered leaf blowers increased in Southern California over the last several years, which tends to support the lack of enforcement efforts. The majority of the cities in Santa Clara County allow the use of both gas-powered and electric blowers, but they may be operated only during specific hours and on specific days of the week. Attachment B provides a matrix of other California cities regulations on leaf blowers.

Currently, in Santa Clara County, Los Altos is the only city to ban gas blowers. Los Altos has a system that allows citizens to mail in information about potential violators. Once the information is received by the Police Department, a warning letter is sent to the home or business owner where the potential violation took place. After two warning letters are mailed, Section 11.10.060 of the Los Altos Municipal Code is used, if needed, for compliance. This section makes it unlawful for any person or entity to maintain, create, cause or permit a public nuisance. Failure to comply may
result in citations issued and a mandatory appearance before a hearing officer, with the possibility of additional fees and civil penalties imposed.

When this program began, the Los Altos Police Department received approximately 100 calls a month; after a few months, however, the calls diminished to 15 calls per month. There is a Code Enforcement Officer assigned to monitor the complaints and this officer is responsible for sending the property owner a letter insisting that gas-powered blower operations cease. The results have been positive and many homeowners comply when faced with a threat from the city. Los Altos Police Department believes this approach has improved the environment and the quality of life for its residents.

Enforcement in Palo Alto

Proactive enforcement did not begin in Palo Alto until the first part of 2002 for several reasons. Staff had underestimated the numbers of commercial gardeners who needed to be trained and certified. Due to the large numbers, the training/certification process took significantly longer than originally anticipated. According to Department records, approximately 1,600 gardeners have been trained and certified. Due to other changes in the noise ordinance regarding construction noise, training for Community Service Officers and officers was delayed until December 2001. As a result, full proactive enforcement efforts actually began in the first part of 2002.

The number of calls-for-service related to leaf blowers has decreased. In 2001, there were 131 calls for service for leaf blowers; in 2002, 125 calls; in 2003, 88 calls; in 2004, 89 calls; and year-to-date in 2005, 31 calls. Since 2002, 22 citations have been issued. Staff concedes that enforcement, especially that is proactive, did not take place at an acceptable level. Higher priority calls-for-service frequently delayed response times so that by the time an officer arrived, the gardener had already left. Additionally, the Community Service Officer position that had been approved by Council to focus on the education and enforcement aspects was eliminated in 2003-04 due to budget cuts. Another reason that the calls-for-service have declined may be that some citizens became frustrated and stopped reporting potential violations because the police response could not be done in a timely manner.

Staff believes, however, that the education and certification process for commercial gardeners has resulted in some improvements. As an example, while improvement is still needed in this area, Public Works staff reports that they have seen a decrease in the amount of debris blown into the streets over the last several years. Staff also believes the education and certification of so many gardeners has helped to ensure that more gardeners use the equipment properly and comply with the ordinance.

Staff would propose using the last patrol CSO to manage and facilitate the education, certification, and enforcement efforts for leaf blowers. However, this would result in even longer delays, or in
some cases no response, to cold theft cases, non-injury accidents, other noise complaints, etc. that have heretofore been handled by CSOs.

Community Outreach

Staff conducted two publicized open forum meetings to seek community input. The first meeting was held on April 7, 2005, and was specifically intended to obtain comments from gardeners, landscapers and other individuals who use leaf blowers as part of their daily job. Approximately 100 professionals attended the meeting. All of the individual gardeners and those representing larger organizations were unanimous in their strong recommendation to retain gas-powered leaf blowers. For them, gasoline-powered leaf blowers are critical tools necessary to getting the work done in an efficient and timely manner. The ban of gas-powered leaf blowers would require sizable cost increases to customers for the same service. Individual gardeners would no longer be able to maintain the same number of clients as the time to complete each job would be doubled. Many spoke of the quietness and clean burning nature of the newer gas-powered leaf blowers.

On April 26, 2005, a second meeting was held to seek input from residents and business owners. Approximately 80 to 90 people attended, the majority of which wanted a total ban on leaf blowers, gasoline and electric. Many complained about noise and the exhaust emissions the blowers produced and how they were detrimental to the environment and people’s health. Others expressed concern about the airborne particulate matter. Some speakers suffer from severe allergies and asthma and explained how leaf blowers create unhealthy air quality which exacerbates their condition. The overwhelming majority of those who spoke against the continued use of leaf blowers were residents who, for various reasons, are normally home during the day and therefore are more routinely exposed to the negative impacts of leaf blower use.

As mentioned previously, another frustration raised by residents is the seemingly futility of calling the police to report violations. Some spoke of firsthand experiences about calling the police, only to observe the gardeners leave prior to the officers’ arrival. Their experience has resulted in their not reporting violations any longer. A few of the speakers indicated that they did not report leaf blower violations because they did not want to “bother” the police or take them away from more important concerns.

These meetings and related publicity and news coverage generated numerous other e-mails, letters and telephone calls from community members, gardeners, and business owners. The opinions expressed have been comparable to the meetings: residents tended to support a leaf blower ban or far greater restrictions, and gardeners emphasized the tremendous hardship a ban would create and pointed to the quietness and efficiency of the newly manufactured leaf blowers as an amicable solution. Some residents, however, have expressed a desire to not go forward with the ban.

Bay Area Gardeners’ Association
Prior to June 2001, the training and certification process for commercial gardeners had been administered by Police Department staff several times each month. When the CSO position was eliminated in 2003-04, staff decided to have BAGA take over administration of the process, with the training/testing sessions being held at their Redwood City facility. A Police staff member attends and is responsible for correcting the tests and issuing the certification cards.

This last year, staff has met with BAGA Board Members on several occasions. The interactions were very productive. After reviewing the CARB Tier standards and learning that manufacturers are required to meet the CARB standards, it was clear a recertification program needed to be implemented. BAGA expressed its desire to facilitate a program that would require commercial gardeners working in Palo Alto to get recertified and to buy new leaf blowers if the leaf blowers currently being used did not meet the CARB Tier II standards. BAGA Board Members recommended a one-year grace period for the gardeners to purchase the new equipment.

The recertification program would educate commercial gardeners about the CARB Tier standards, changes in technology and how it has improved leaf blowers, and the requirement that gardeners purchase new leaf blowers that have lower dBA ratings and decrease the amount of exhaust emissions. A portion of the recertification class would remind and educate the commercial gardeners about the proper use of the leaf blower. It would also inform the gardeners on any change to the Municipal Code. The current educational material will be updated and the CSO would assist BAGA with the recertification program.

City Crews and Contractors

Currently the costs to maintain parks and City facilities in residential areas using gas-powered leaf blowers is $585,500.

A ban of gas-powered leaf blowers in residential areas would have a substantial financial impact on the City’s Community Services and Public Works Departments. To maintain the same level of cleanliness in the City, staff estimates the ban on these blowers and the resultant switch to performing the work manually would increase costs by over $1 million annually (Attachment C).

**POLICY OPTIONS**

Staff has considered alternative options for dealing with the leaf blower issue. The pros and cons for each of these alternatives are provided.

1) Make no changes in the current ordinance that prohibits the use of all leaf blowers in residential areas:

   **Pros:**
• The quality of life concerns raised by residents associated with noise, particulate matter, exhaust emission and topsoil damage would decrease.
• Enforcement of leaf blower violations would be more straightforward, in that operational noise measurements, proof of gardener certification and equipment compliance verification would be eliminated.

Cons:

• Most likely would result in sizable cost increases to customers for the same service. Individual gardeners would need more employees or longer periods of time to complete the same job sites. Gardeners have informed staff that without leaf blowers, the time to complete each job is doubled.
• Residents would also be prohibited from using leaf blowers..
• Apartment complex owners and association-governed complexes would more than likely pass added maintenance costs on to tenants.
• Absent the use of leaf blowers and the convenience and ease of cleanup they afford, there is a possibility that the amount of homeowner debris being picked up disposal would be lessened, consequently there are additional concerns regarding the impact to storm drains and flow to Bay.
• Residents not cleaning up the sidewalks and gutters can be expected. Residents and their contractors would no longer be blowing out under parked cars leaving additional debris to eventually find its way to the storm system.
• There will be significant costs to continue maintaining City parks, open space and public works projects
• Initially, staff believes there would be an increased number of calls-for-service and a higher expectation of timely enforcement of leaf blower violations.

2) Prohibit the use of only gas-powered leaf blowers in residential areas:

Pros:

• Exhaust emissions and use of fossil-fuels would be reduced.

Cons:

• Many of the commercial grade electric blowers produce a higher pitched noise level which some believe to be more intrusive than the newer combustion-powered blowers.
• The use of gas-powered generators, which produce higher noise levels and significant gas emissions would increase.
• There will be additional costs to continue maintaining City parks, open space and public works projects as they replace existing equipment and contractors would increase their costs to the City due to the change in equipment.
• Added costs and limitations of commercially available electric or battery-operated blowers would increase commercial gardener’s expense and time to complete a given job.
• The inherent safety hazards created by the use of electrical equipment in an outdoor environment and the use of extension cords would increase.
• Apartment complex owners and association-governed complexes would more than likely pass added maintenance and equipment costs on to tenants.

3) Prohibit the use of leaf blowers used only by City crews and commercial gardeners in residential areas:

Pros:
• The noise levels associated with leaf blowers would theoretically decrease, especially during the primary complaint periods, daytimes, Monday through Friday.
• See #1.

Cons:
• See #1.
• Because residents would be allowed to use their individuals leaf blowers, the issue and concerns over noise levels, exhaust emissions, particulate matter and damage to top soil would continue to exist, although to a lesser degree.

4) Prohibit the use of leaf blowers by commercial gardeners in residential areas but exempt City crews and contractors:

Pros:
• Many of the pros would be the same as identified in policy option #3.
• The costs associated with parks, open spaces and public works operations and equipment would not increase.

Cons:
• Creates a double standard for the City.
• See #1.
• Since City crews would be allowed to operate in residential areas, those citizens who live in and around these areas would still be impacted by the noise, exhaust emissions, and damage to topsoil as propagated by City equipment or City contractors.

**RESOURCE IMPACT**

Depending upon Council’s decision, costs associated with maintaining the current level of cleanliness in City parks and facilities in residential areas would increase to approximately $1,123,700 annually (Attachment C). Since the City’s costs are anticipated to double, it can be anticipated that homeowners’ costs would increase by a commensurate amount.

The cost of a dedicated CSO is $76,682, which includes salary and benefits.

**POLICY IMPLICATIONS**

This will be dependant on the decision the City Council makes.

**ENVIRONMENTAL REVIEW**

This project is categorically exempt from the California Environmental Quality Act (CEQA) as it restricts the use the leaf blowers for environmental protection purposes.

**ATTACHMENTS**

CMR:352:99
CMR:139:99
CMR:120:00
CMR:202:00
CMR:265:02
Attachment A: CARB Tier III Complaint Manufacturers List of Certified Small Off-Road Engine List
Attachment B: Summary of Other City Ordinance
Attachment C: Projected City Costs
Attachment D: Ordinance