

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

DATE: February 14, 2007

TO: Bill Rosendahl, Chairperson
Public Works Committee
Attention: Adam Lid, Legislative Assistant
City Clerks Office

FROM: 
William A. Robertson, Director
Bureau of Street Services

SUBJECT: STREET TREE POLICIES

BACKGROUND

This correspondence is in response to a Council Motion presented by Councilmember Jan Perry and seconded by Councilmember Tom LaBonge on October 12th, 2006, (Council File # 06-2445) regarding the City's Street Tree Policies. Specifically, the Bureau of Street Services (BSS) was requested to prepare a report revising the City of Los Angeles' current Street Tree Policies in order to conform to the City's changing tree needs. The report deals primarily with those trees in the public right-of-way as well as trees growing on the grounds of City facilities.

DISCUSSION

The City of Los Angeles contains one of the largest urban forests in the world. City Departments manage nearly 700,000 street trees, 850,000 City park trees, and approximately 40,000 trees on City-owned facilities. Additionally, there are over ten million trees planted on privately held property. This number was recently quantified by the United States Forest Service Canopy Cover Analysis report. This brings the City's urban forest total to nearly twelve million trees, which, to the best of the Bureau's knowledge, makes the City of Los Angeles' urban forest one of the largest in the world.

The management of this vast and valuable resource is spread between several City agencies and the public. The Bureau's Urban Forestry Division (UFD) manages the City's street trees, median islands, private property vegetation that may impact the public right-of-way, and affords protection to the City's native trees through the Los Angeles Municipal Code (LAMC). The Department of Recreation and Parks (DRP) manages the trees located in City Parks and at City facilities. At this time, DRP is not funded to maintain the trees on public facilities; therefore, the trees on City facilities are only serviced on an emergency basis. There are also a small, but significant, number of trees on Los Angeles World Airport (LAWA) property and the Port of Los Angeles (POLA) property that each department respectively manages and maintains. The Department of Water and Power (DWP) is responsible for maintaining approximately 400,000 trees in proximity to electrical distribution lines in the public right-of-way and on private property. The remainder of the City's urban forest is managed and maintained by the owner of the property on which the trees stand.

In 1993, the City Council adopted the "Street Tree Policies." The Policies focus on the Urban Forest as a vital infrastructure element, which produces ecosystem services for the residents of the City. The Policies also address goals and strategies for maximizing the quality of life and environmental benefits provided by trees. Essential to maximizing these benefits is managing urban trees using established Best Management Practices (BMP) and sustainable urban forestry principles. For the most part, these strategies have been implemented or are of the type that are continuous and always on-going.

While many Policy goals have been met, one goal that has not been reached is to provide consistent and appropriate level of care to the street tree population in order to maximize the ecosystem services that trees can provide the City's citizens.

Professional standards and urban forestry BMP recommend maintaining an annual pruning frequency of five years. In the past 25 years, this frequency has only been met twice but has never been sustained. From 1990 to the present, the City's street tree pruning frequency has fluctuated dramatically from a five and a half-year cycle to a 32-year cycle, being 11 years the average cycle.

The inability to maintain an adequate pruning cycle has significantly impacted the long term health and safety of the urban forest and reduced city staff's ability to manage the urban forest in a proactive manner. This inability increases:

- service request backlogs,
- citizens' dissatisfaction with city services -- in particular as they relate to the urban forest,
- average per-tree maintenance cost, and
- number of emergencies due to limb and tree failure, which consequently result in a higher volume of claims filed against the City.

Ultimately, the deterioration of the urban forest health and the loss of the ecosystem services negatively impact the quality of life of the City residents.

The key to achieving a BMP pruning cycle is adequate funding. However, current City of Los Angeles urban forest resource funding levels trail even mid-level industry standards. A study, commissioned by the City in 1999 and performed by Dr. James Clark of HortScience Inc. found the City spent \$18 per tree while the mid-range across the country was \$25 per tree. At that time, the Division's budget was \$12.3 million dollars. The budget for the current 2006-2007 Fiscal year is \$12.2 million or \$17 per tree. This being considered, the 1999 urban forestry budgeting which was inadequate at that time has been further reduced even while not accounting for inflation. The City of Los Angeles, the nation's second largest City with one of the largest urban forest, is often viewed as a professional urban forest leader, yet it is far from exemplary when it comes to funding the care and management of our "living Infrastructure."

Achieving and maintaining a five-year pruning frequency would have a significant impact on maximizing ecosystem services, improving the quality of life of our residents, and accomplishing the major component of the Mayor's goal of making Los Angeles the greenest, cleanest, healthiest large city in the nation.

The Council Motion outlined four items of concern are:

1. Deferred maintenance
2. Increase in LAPD requests for service in an effort to fight crime.
3. Maintenance of trees on municipal facilities.
4. Long term maintenance needs of trees planted under the Million Trees initiative

Item 1 - Deferred Maintenance

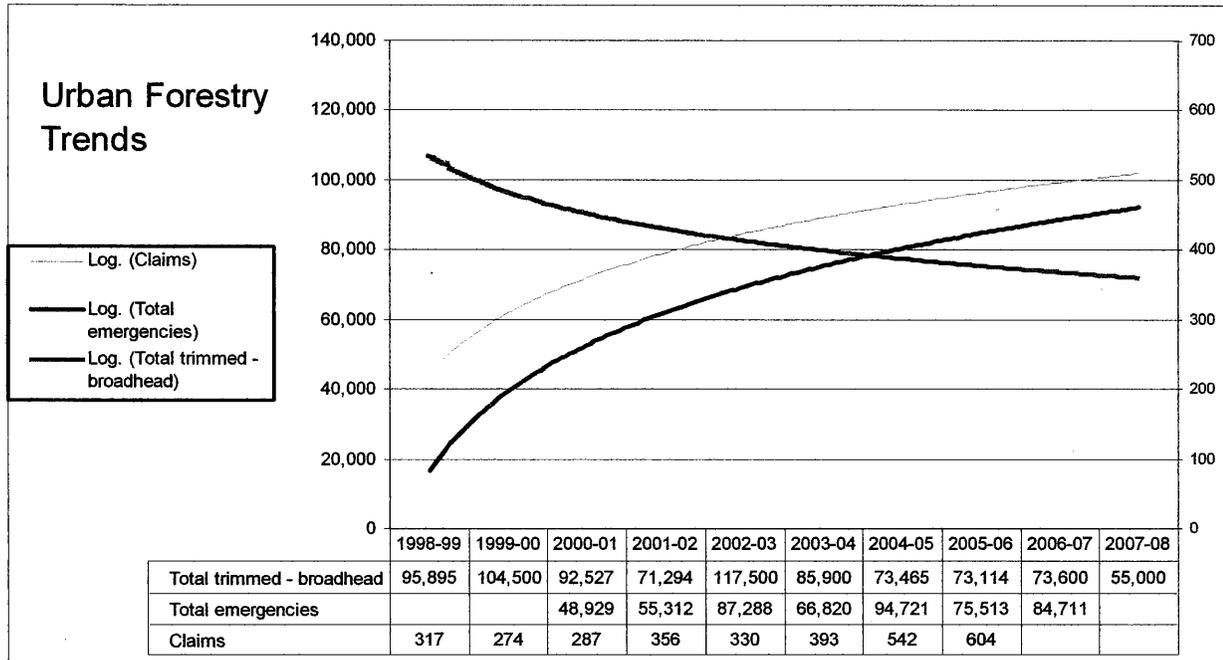
Impact due to street tree deferred maintenance manifests in different ways. For example, deferred maintenance results in increased limb and tree failures. During the Summer of 2006, the street tree population suffered an unprecedented occurrence of "sudden or summer limb drop syndrome." Although the specific mechanism for failure has not been determined, high temperature and lack of maintenance are contributing factors to this syndrome. During the months of June through September, the syndrome dramatically increased the number of BSS street tree related emergencies. Emergency calls in June and September showed an increase of more than 50 percent over last year's numbers, and in July and August the calls nearly doubled those from the previous year. Compared to historic records, there has been a 60 percent increase this year than in the previous five years. This increase results in a significant shifting of resources that ultimately affect the delivery of other programmed services or even worse, the Bureau is required to use overtime to expeditiously clear the limb drops.

The syndrome was particularly pronounced on three or four tree species. American Sweetgum (*Liquidambar styraciflua*) comprised as much as 60 percent of the impacted trees. Carob (*Ceratonia siliqua*), Chinese Elm (*Ulmus parvifolia*), and Modesto Ash (*Fraxinus velutina*) were also greatly impacted. Although particularly pronounced in 2006, Summer Limb Drop is not an isolated event. Every year UFD anticipates sudden limb drop episodes, and as trees receive less routine maintenance, summer limb drop events increase.

Deferred maintenance is also manifested when Santa Ana winds and winter rainstorms occur. During these events, limb and tree failures are common place and are caused by several factors including wind speed, excessive soil moisture, and tree canopy resistance to the wind. When trees are not pruned regularly, limb and tree failures increase due to the "sail effect" caused by the un-pruned, dense tree canopy and to the physical weight of the overgrown tree. This in turn increases the amount of time diverted to emergency response, causes overtime usage, and raises the potential for property damage and bodily injury to citizens as well as City staff.

Additionally, deferred pruning results in increased liability claims to the City. There has been a 120 percent increase in claims from Fiscal Year 1999-2000 to Fiscal Year 2006-2007 (see chart A). The increase in claims and resultant settlements will also increase the financial responsibility of the City.

CHART A



Street trees pruned on an insufficient cycle places the City at increased risk. The probability of a street tree failure causing a large financial property settlement or, even worse, inflicting bodily harm or death is increased. UFD is confident that more frequent pruning will alleviate a substantial amount of risk exposure.

Trees also provide a myriad of environmental services. Two of critical importance to the City is reduction of storm water run-off and removal of air pollutants. The loss of limbs and entire trees reduces urban forest potential for delivering ecosystem services. This deferred maintenance cost is becoming more important as the Environmental Protection Agency now considers trees to be a greenhouse gas mitigation source. Furthermore, municipalities across the nation are using trees as a mitigation tool to reduce storm water run off by intercepting rain water that would otherwise enter our rivers, bays, and harbors along with street level pollutants. Research conducted by the U.S. Forest Service indicates that for every \$1 invested in tree care, municipalities receive \$2.80 in environmental services. Trees allowed to deteriorate due to deferred maintenance produce less environmental services.

Lastly, the image of the City is tarnished when its residents see a neglected and failing street tree population. The inability to provide a timely tree pruning cycle also places the Bureau and City in a position that exacerbates resident's perception that they do not receive their fair share of City services. These intangible factors are damaging to the Division, Bureau, City and, more importantly, the resident's quality of life.

The effects of deferring maintenance to the urban forest may be negligible on the short term. Prolonged neglect has increasingly serious consequences that compound exponentially from year to year.

Deferring urban forestry maintenance, particularly street tree care, results in: increased limb and tree failure during summer heat spells, fall winds, and winter rainstorms. Furthermore, increased emergency response time, increased use of overtime funding, increased street tree related tort claims, increased liability risk exposure, and a decrease in the ecosystem services provided by the City's street trees.

Division records, service requests, and claims have indicated a correlation between pruning cycles and all of the above concerns. Therefore, in the best interest of the City, the Division recommends increasing the street tree maintenance funding levels by reducing the pruning cycle to five years. This would save money, time, property, and potentially lives.

Item 2 – LAPD requests for service in an effort to fight crime

As part of the Safer Neighborhoods Program, the Los Angeles Police Department (LAPD) has installed remote video cameras in high crime areas of the City. LAPD opines this significantly reduces crime by providing recorded evidence of criminal activity. Many of these cameras have been installed near street trees, often creating line-of-sight problems. As a result, in the last few years, the Bureau has increasingly received requests from LAPD to prune trees.

In addition, LAPD asserts that there is a correlation between street light illumination and criminal activity; this correlation is commonly known as “the cover of darkness factor.”

Street lights and street trees are both an integral part of the City's infrastructure system. There are approximately 250,000 street lights and a little less than 700,000 street trees along the City's public right of way and consequently, it is understandable that there are locations where the City's street lights and street trees are in conflict, minimizing the illumination of said street lights. For many years the UFD has collaborated with the Bureau of Street Lighting to provide additional pruning of trees adjacent to street lights.

To minimize this conflict, the Bureau of Street Lighting has historically provided UFD additional funding for tree pruning contracts in street light Assessment Districts. The funding amount has varied in past fiscal years from no funding to 2.7 million dollars. However, as indicated in the motion, the Bureau of Street Lighting has discussed the potential of eliminating this funding source altogether. This would severely affect the Bureau's ability to properly maintain trees and assist LAPD's crime fighting efforts.

While these funds are essential in minimizing tree/street light conflicts, the funding may only be used in street lighting assessment districts, which restricts the UFD from utilizing these funds outside of those areas. Therefore none of the Department of Water and Power “utilitarian” street lights may be cleared using Street Lighting funds and no funds are provided by DWP to clear these lights. Additionally, the monies may not be used to prune any Palm tree species.

A regular pruning cycle of five years would significantly assist UFD in meeting many of LAPD's tree pruning needs and reduce conflict between street lights and street trees. At locations where street lights exist within the street tree canopy, the urban forest BMP requires removal of the conflicting tree and replanting at a site sufficiently distant from the street light so it will not impact its illumination, replanting a smaller canopy tree, or leaving the site vacant.

By providing funding for tree pruning on a more consistent basis, crime as well as conflicts between street lights and surveillance cameras will potentially be reduced. At locations where regular maintenance cannot allow for street light/camera and street tree coexistence, UFD suggests tree removal in the interest of public safety.

Item 3 – Municipal Building Tree Maintenance

Historically, the Department of Recreation and Parks (DRP) provides inspection and tree care services for trees growing on municipal building sites even though no funding is provided for this service. Beginning in Fiscal Year 2002-2003, DRP reduced this service citing a lack of specific funding for these tasks. Since that time, with a few exceptions, very little tree care maintenance has occurred at municipal buildings. In an effort to stem the effects of not pruning trees at municipal sites, DRP requires facility managers supply specific work requests, at which time, DRP would provide a cost estimate to the requesting department. Upon acceptance of the cost estimate and transfer of funds by the requesting department, DRP then performs the work.

Most of these facilities cite a lack of their own funds and now often request that UFD prune the facility trees. UFD is not funded to provide these services. UFD performs emergency tree services at Police Stations, Fire stations, and Libraries as a preventative measure until a long term and sustainable solution is found. When UFD provides these services, it reduces its ability to provide the services that are mandated and required of the Division.

UFD recommends the most effective method to ensure that municipal facility trees are safe and properly maintained is to provide funding for an appropriate City facility tree pruning cycle. Unlike street trees, trees on municipal sites may not require as frequent a pruning cycle. To determine the appropriate cycle will first require an assessment and inventory made of City facility trees. The inventory will assist City urban forest managers to prioritize tasks and decide how to best manage and care for these trees. These trees could also be included as infrastructure in the City's Geographic Information System (GIS).

The Bureau opines the UFD is the most appropriate agency to oversee the management of municipal facility trees. Nevertheless, without an appropriate funding structure there is no City agency that may take on this additional workload at this time.

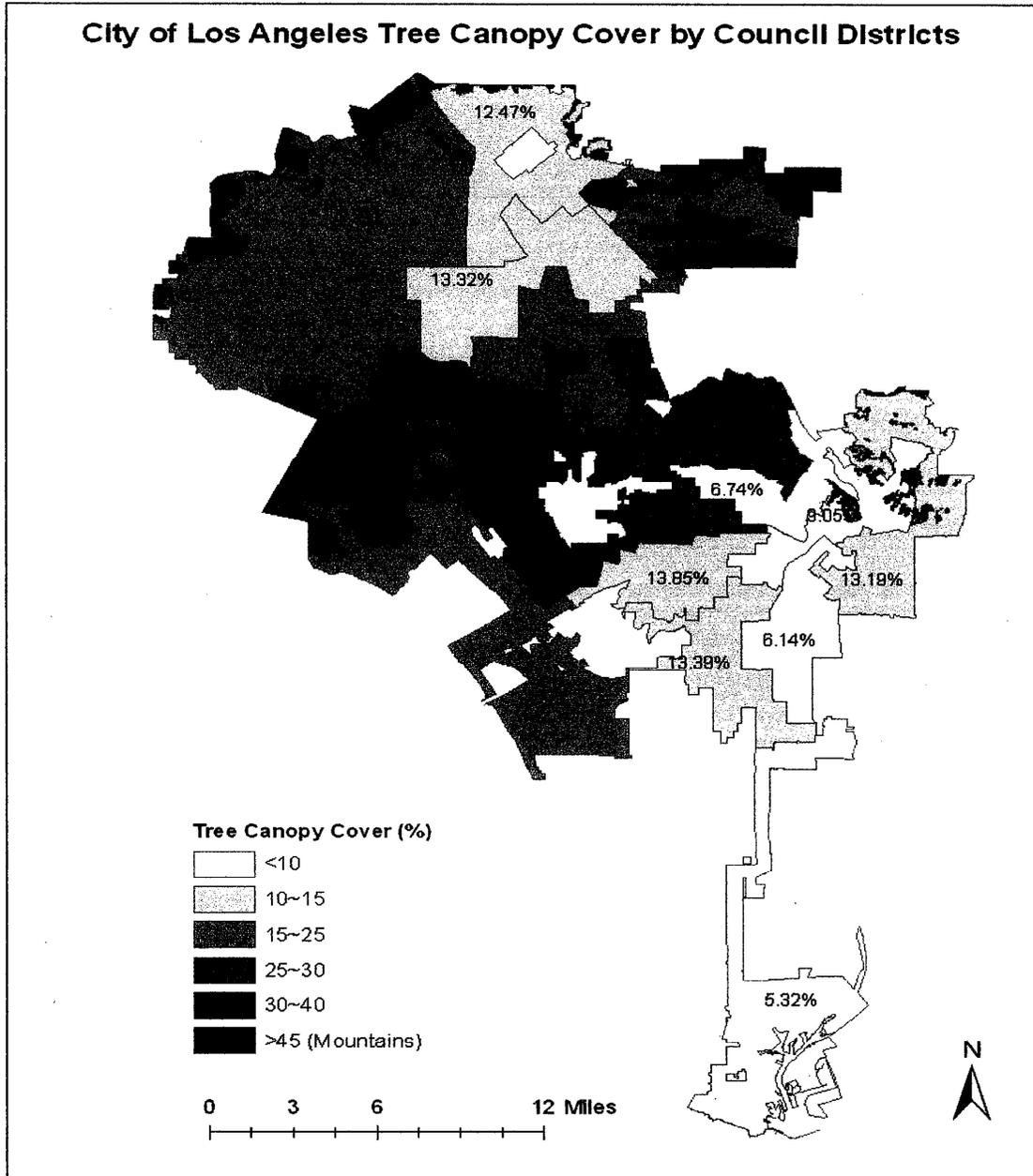
Item 4 – Million Tree Initiative Trees and Indian Laurel Fig (*Ficus microcarpa*) Trees

Million Trees LA (MTLA)

While the City has one of the largest urban forest in the nation, there is still substantial room to grow additional trees on both public and private property. The recent Canopy Cover Analysis conducted by the U.S. Forest Service concluded that the total tree canopy cover for Los Angeles is 18 percent and significantly below the national average of 27 percent. In some council districts, the canopy cover are as low as 5 percent, which is close to a desert-like environment (see map).

In an effort to increase urban forest canopy, clean the City's air, reduce storm water run-off, increase property values, and make Los Angeles greener, cleaner, and healthier, the Mayor has launched the Million Trees LA project (MTLA). MTLA is designed as a civic engagement project that creates partnerships between the City, community groups, non-profits, businesses, and individual residents working together to plant and provide long-term stewardship of trees on both public and private land.

Approximately, one third of the trees will be planted on publicly owned or controlled property while the remainder will be planted on private property.



UFD estimates there are approximately 110,000 potential street tree planting locations within the City. Due to conflict with other infrastructure, poor soil conditions, and property owners declining tree planting, approximately twenty percent of these sites will not be planted, leaving 88,000 potential planting sites. Based upon the current street tree population, 700,000 trees, the City's street tree population will be "planted out" at 788,000 trees. This amounts to a thirteen percent increase in the street tree population. An estimated 40,000 sites are immediately available for planting. The remaining potential tree sites are in commercial areas with full-width sidewalks that will require sidewalk cutting.

While this is a significant increase to the City's street tree population, the initial impact on the overall pruning cycle would not be substantial. However, as the trees mature, funding for the increased street tree population will need to commensurately rise to ensure that the trees remain safe, healthy and thriving.

The majority of street tree plantings will be performed by MTLA project partners including UFD, Tree People, Los Angeles Conservation Corp (LACC), Hollywood/LA Beautification Team (HBT), North East Trees (NET), Korean Youth Community Center (KYCC). Funding will be provided through state and federal grants, Department of Water and Power "Trees for a Green LA" program, and the MTLA Foundation. Under the MTLA project, the Division will be required to facilitate, provide oversight, inventory and manage the work performed by the non-profits and citizen groups planting in the Public Right of Way.

Indian Laurel Fig

The motion specifically addresses the problems associated with the Indian Laurel Fig (*Ficus microcarpa nitida*) tree. Indian Laurel Fig trees are evergreen, fast growing, hardy, drought resistant, and provide exceptional ecosystem services. This tree species is extremely adaptable and has thrived in hostile street tree environments. Since this tree is a tremendous urban performer, it is essential the City make their continued presence in the urban forest a reality.

The fast growing nature of Indian Laurel Fig has contributed to conflicts with adjacent infrastructure including street lights, sidewalks, buildings, and signage. Building and signage conflict could be substantially reduced by implementing a five year pruning cycle. An appropriate pruning cycle will also reduce crime and street light conflicts

Although, adequate root space has been a continued problem with Indian Laurel Figs, these trees are very adaptable to root pruning and most often can remain while sidewalk repairs are completed. The Bureau has made significant progress in repairing the City's sidewalks through the Sidewalk Repair Program and the 50/50 Voluntary Partnership program.

The City rarely plants Indian Laurel Fig in new plantings except in large parkways where it is less likely to create hardscape damage. Nevertheless, due to the myriad of ecosystem services provided, UFD retains mature Indian Laurel Fig trees whenever possible.

RECOMMENDATIONS

RECOMMENDATION #1

To address years of deferred maintenance of city trees, the City's urban forest managers recommend achieving and maintaining an overall five-year street tree pruning cycle. This action will improve the health and safety of the urban forest, increase ecosystem services, and improve customer satisfaction with City services. Ultimately, the increase in annual pruning funding will ultimately reduce the overall cost of the urban forest program by minimizing reactive pruning, emergency response calls, and claims

filed against the City.

It is recommended the City Council, subject to the Mayor's approval, provide ten million dollars annually above the UFD regular operating budget for contract pruning services to reduce the street tree pruning cycle to five years.

FISCAL IMPACT STATEMENT
\$10 Million to General Fund.

RECOMMENDATION #2

To address LAPD's request to increase services in high crime areas, it is recommended the City Council, subject to the Mayor's approval, provide the funding for the Urban Forestry Division to fund two crews to trim an additional 4,000 trees annually in high crime areas as part of the City's Safer Neighborhoods Program.

FISCAL IMPACT STATEMENT
\$758,399 to the General Fund

RECOMMENDATION #3

To address the lack of routine tree care on municipal facility grounds, it is recommended the City Council, subject to the Mayor's approval, provide the funding for the Urban Forestry Division to:

- Inventory and assess all trees on City owned property and Municipal building grounds
- Develop a Municipal Grounds Tree Management Plan
- Prune Municipal grounds trees on an appropriate cycle as determined by the management plan
- Integrate the Municipal Grounds Maintenance Plan into a unified Urban Forest Master Plan

FISCAL IMPACT STATEMENT

The fiscal impact of this recommendation is not known at this time.

RECOMMENDATION #4

To address the funding needs of the Million Trees LA Project, it is recommended the City Council, subject to the Mayor's approval, provide the funding for the Urban Forestry Division to:

- Develop, Coordinate, and facilitate tree planting and tree distribution events and initiate the civic engagement component of MTLA
- Monitor and inspect the planting of street trees by non-profit and community based organizations
- Water street trees that are planted as part of the MTLA program
- Provide long term care for the newly planted trees.

FISCAL IMPACT STATEMENT:

\$1.42 Million to the General fund

SUMMARY

The urban forest is an integral part of the City of Los Angeles infrastructure system. It is the only element that actually gains value over time. The street trees and municipal grounds trees are a significant portion of the City's urban forest. The health, safety, and proper management of this resource are the City's responsibilities. Ensuring proper management will enable this valuable resource to maximize the ecosystem services it provides now and will provide a living gift to our future and for generations to come. Adoption of these recommendations will assist in making the City, cleaner, greener, healthier and safer place for all our residents.

If you have any questions, please contact me at (213) 847-3333 or George Gonzalez, Chief Forester, Urban Forestry Division, at (213) 847-3077

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