



Information Item

Date: September 12, 2012

To: Mayor and City Council
From: Karen Ginsberg, Director of Community and Cultural Services
Subject: Status of Landmark Eucalyptus Tree located at 522 24th Street

Introduction

This information item provides an update on the condition and plans for addressing the Eucalyptus Tree located on the property at 522 24th Street.

Background

In late July and early August, 2012 the subject 100 year old Eucalyptus tree located on the property at 522 24th Street dropped limbs on three separate occasions. One was a lateral limb and two were larger scaffold limbs. Two of the limbs landed on the neighboring property and one landed on the tree owner's property. Significant property damage occurred as a result of the third failure. The two largest limbs that failed showed clear evidence of internal fungus, indicating the need to inspect the structural integrity of the tree. These three limb failures occurring in such rapid succession caused significant concern regarding the overall health of this aging tree.

Designated a City Landmark in 2003, this tree is estimated to be approximately 100 years old, well beyond the average life span of most urban trees. As trees age they eventually become senescent and begin to show signs of decline. A major symptom of a declining tree is the shedding of weak limbs in calm weather conditions. It is an indication of the tree's inability to provide moisture throughout its canopy.

Discussion

On August 13, 2012 a Consulting Certified Arborist was retained by the City to gather additional information regarding the health, vigor and structural integrity of the tree. During that inspection, a bucket truck was used to lift the Arborist up into the canopy of the tree for better visual access to the canopy.

During that inspection it was discovered that several other limbs had been aggressively headed back (cut off) in a manner similar to topping a tree (the indiscriminate cutting of tree branches to stubs or lateral branches that are not large enough to assume the terminal role). This apparently occurred more than 20 – 30 years ago. The Arborist could see that the resulting shoot growth that had grown out from the ends of those heading cuts had become heavy weight limbs. It was determined that these large limbs are prone to failure due to the decayed wood that typically results from the type of cuts that were made years ago.

Furthermore, from the inspection, it was determined that some maintenance pruning had been performed on this tree over the years in order to thin out the canopy. This resulted in a canopy with the majority of its foliage weight at the end of the branches. Long limbs with heavy end weight are extremely prone to failure. Moreover, because of the continued thinning of the canopy, it is now very difficult to perform corrective pruning on the tree because there are very few lateral branches available to reduce the size of the canopy in order to lighten the load on the heavy branches. Accordingly, based upon her review, the Arborist determined that the tree had reached the end of its safe useful life expectancy and that the dangers to public safety outweighed the benefits of the tree and therefore recommended removal of the tree.

On Tuesday, September 11, 2012, a field examination of the tree was conducted by four independent Certified Arborists and the City's Community Forester. Three of the Arborists were retained by the owners of the tree and the fourth Arborist was the City's Consulting Arborist who inspected the tree on August 13, 2012 as described above. All five of these Certified Arborists are qualified in assessing risk associated with trees and represent well over 100 years of combined experience with managing mature trees. The tree was examined from within the canopy using three separate aerial lifts so the branching structure

could be assessed up close. While in the tree, it was discovered that there were numerous old wounds and countless small cracks in the canopy that are entry points for decay fungi to infect other limbs in the same way the two previous failed limbs were infected.

The fungus that was found on the two most recent failed limbs was identified as *Laetiporus gilbertsonii*. It degrades the wood integrity by causing rapid decomposition. It is a brown rot that eats away the lignin in the cells that provide strength to the wood, and it is more active during warm and humid weather. As the fungus eats away at the wood on the interior of the limb, the tree continues to produce new bark on the exterior of the branch during the season's flush of growth. Over time, the new bark can eventually enclose the old wounds, which are therefore not always detectable from the outside. And the limbs become heavier while the fungus is decomposing the inner wood. Experience with eucalyptus trees has been that aging trees infected with this fungus can continue to shed limbs for years until the tree dies.

In the field the Arborists discussed pruning treatment as a possible measure to extend the life of the tree. One of the Arborists supported this approach by reducing the size of the tree's canopy as much as 30% and cabling specific limbs. However, the four other Arborists concluded that this treatment would not eliminate the spread of the decay and could in fact invite further infection. Moreover, it was the opinion of four out the five Arborists that the pruning treatment would not prevent limb failures in the future. Therefore, these four Arborists reached consensus at the site after inspection of the tree that in the interest of public safety the tree should be removed.

Based upon the recommendations reached by four of the five Certified Arborists who inspected the Eucalyptus tree and the danger to public safety attendant upon the likelihood of future limb failures, the City proceeded with implementation of the order to remove the tree issued on August 22, 2012 to the property owners. The tree must be removed by September 15, 2012. The property owners are complying with the order and have commenced removal.

Prepared By: Walter Warriner, Community Forest Superintendent