



Date: February 26, 2020  
To: Thomas B. Modica, Acting City Manager *T.M.*  
From: *CB* Craig A. Beck, Director of Public Works  
For: Mayor and Members of the City Council  
Subject: **Magnolia Tuliptree Scale Infestation**

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At the October 8, 2019 meeting, the City Council directed the City Manager to work with the Public Works Department (PW) and return to the City Council with information on the tuliptree scale pest, and identify next steps for treatment and removal to address the infestation.

**Background**

The purpose of this memorandum is to update the City Council on the insect pest, known as the tuliptree scale (*Toumeyella liriodendri*), impacting the magnolia (*Magnolia Grandiflora*) tree population in Long Beach. The tuliptree scale is an aggressive tree infestation that removes the tree's sap, causing damage, dieback, and defoliation that can eventually lead to the death of the tree. In addition, the tuliptree scale produces a considerable amount of honeydew, a sticky substance that can coat sidewalks, streets, and parked automobiles.

There are approximately 6,975 magnolia trees in the city's 93,500 street tree inventory. These trees have been placed into one of five categories: no infestation, minimal infestation, noticeable infestation, severe infestation and full infestation. Attachment A provides an inventory breakdown by Council District. Approximately 4,404 (63 percent) of magnolia trees display no signs of infestation, and 2,571 (37 percent) of the trees have some level of infestation. The table below provides a summary, based upon the level of severity:

<b>Magnolia Tuliptree Scale Infestation</b>	
No Infestation	4,404
Minimal Infestation (<25%)	1,078
Noticeable Infestation (<50%)	756
Severe Infestation (<75%)	545
Full Infestation (>75%)	192
<b>Total</b>	<b>6,975</b>

At the onset of the tuliptree scale infestation, staff consulted with a tree care contractor, West Coast Arborist, to develop a pest management plan. In October 2018, treatment was initiated involving 160 trees. The plan included inspecting, pruning, trimming, and removing infected trees, and applying a specialized insecticide called imidacloprid to the root system

to counteract the infestation and prevent the spread to other trees in the city. A flyer was placed at each residence that provided information of the upcoming treatment. Assistance was requested from residents to water the tree for 15 minutes, twice a week, for two weeks before treatment, and follow up with watering after treatment to allow for the absorption of the insecticide by the tree roots. Results of the treatment indicated that only a 25% to 30% improvement rate was realized. It appeared the trees that received the necessary irrigation had the best rate of success. In addition to the treated trees, 93 trees were removed. Trees are being monitored, but are not currently undergoing treatment. It is anticipated that the infestation will become more active as the summer approaches.

### **Costs**

The City Council allocated \$100,000 in the FY20 budget to address this issue. Staff has completed the magnolia tree condition inventory and consultation with an Arboriculturist on treatment strategies. There are multiple issues associated with the infestation. To better understand the overall impacts, staff developed the following per tree estimates (costs will vary depending on tree size):

- Tree Removal = \$500 (removal and stump grinding)
- Treatment = \$300 (includes community education materials)
- Replanting = \$225
- Sidewalk Pressure Washing = \$125 (to remove honeydew dripping)

Response to the infestation will require a mix of removal and treatment. Staff estimates the overall budgetary impact (assuming further spread of the tuliptree scale is limited) to be \$900,000 to \$1,200,000.

### **Next Steps**

1. Staff is recommending the immediate removal of 192 fully infected trees. It is important to limit spread of the infestation and these trees should be the initial focus. Work is scheduled to start in early March 2020 and will take about 45 days to conclude.
2. Staff is recommending treatment start with the 1,078 trees showing minimal infestation, since they are in the very early stages of the scale impacts and have the greatest opportunity for success. The cost for treatment is estimated at \$325,000. Staff is recommending the City Council consider a strategy where the remaining 1,301 trees require a balanced approach of removal and treatment (50/50). This would cost about \$520,000.
3. Staff currently does not have a good estimate of how many sidewalks require pressure washing. This would be accomplished on a case-by-case basis. Approximately \$50,000 would support 400 sites.

4. Replanting new trees to replace those removed, will require coordination with Development Services and community volunteers to keep the costs low. Appropriate tree species will be identified that are more resistant to the tuliptree scale. Approximately \$100,000 would support 450 new trees.

Public Works is developing information to educate and inform the public. Prior to treatment or removal, residents will be notified on how the City plans to address the infestation for the specific tree at each location.

On February 18, 2020, the City Council approved the allocation of an additional \$900,000 to address the tuliptree scale. This will allow for an immediate expansion of the number of trees to be treated and/or removed. It is anticipated the work plan will fluctuate as more community education and engagement occurs. Staff will track progress and provide the City Council with an update in six months.

If you have any questions regarding this matter, please contact Malcolm Oscarson, Acting Public Service Bureau Manager, at (562) 570-2780.

ATTACHMENT

CC: CHARLES PARKIN, CITY ATTORNEY  
LAURA L. DOUD, CITY AUDITOR  
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AJAY KOLLURI, ACTING ADMINISTRATIVE DEPUTY TO THE CITY MANAGER  
MONIQUE DE LA GARZA, CITY CLERK (REF. FILE #19-1004)

Attachment A  
**Tulip Tree Scale Impact to City's Magnolia Street Tree Inventory**  
 Department of Public Works

Council District	Not Affected	Minimal Infestation	Noticeable Infestation	Severe Infestation	Full Infestation	Total
1	51	43	113	41	31	279
2	203	44	14	8	10	279
3	929	213	77	46	20	1,285
4	531	70	44	16	10	671
5	836	21	23	-	6	886
6	219	110	80	89	31	529
7	389	315	248	225	46	1,223
8	587	185	112	102	20	1,006
9	659	77	45	18	18	817
<b>Grand Total</b>	<b>4,404</b>	<b>1,078</b>	<b>756</b>	<b>545</b>	<b>192</b>	<b>6,975</b>