

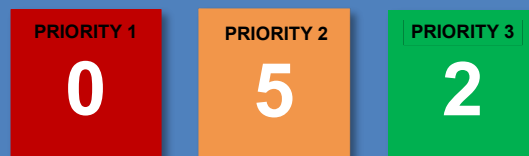
Report #2023-03

PUBLIC WORKS TREE TRIMMING CONTRACT AUDIT

*City of Glendale
Internal Audit*

11.23.2022

NUMBER OF RECOMMENDATIONS



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Acknowledgment

We would like to thank staff from Public Works and West Coast Arborist for the support and assistance provided to us throughout this project.

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A. Overview

Key Outcomes

The Public Works Department (PWD) uses a combination of contractual tree trimming services from West Coast Arborist (Vendor) and in-house crew to maintain the City’s trees. Internal Audit reviewed the City’s contract with Vendor and noted Vendor is generally fulfilling its contractual obligations regarding timely completion of tree trimming assignments and billing the City in accordance with contracted rates. Internal Audit identified seven improvement opportunities related to improving data quality, locating/updating missing work histories, performing qualifying tree services, requesting a Vendor prepared annual maintenance plan, improving system controls and functionalities, and following contract billing frequency.

Impact Dashboard

This table summarizes the applicable value-added categories (total 16) for the seven recommendations based on their priority rankings.¹

	Value Added Categories			
	Compliance	Cost Saving	Efficiency	Risk Reduction
Priority 1 0	0	0	0	0
Priority 2 5	5	0	3	5
Priority 3 2	1	1	0	1

¹ Each audit recommendation may have more than one value-added category. The Definitions of Priority Rankings and Value-Added Categories are located at Appendix 1.

B. Action Plan and Target Completion Dates

The action plan and target completion dates are summarized in the table below. Internal Audit will perform quarterly status follow-up to provide assurance that management is taking appropriate and timely corrective action to address audit recommendations.

Ref.	Management Action Plan	Completion Date
Priority 2		
1.	Correct identified data inconsistencies and establish controls to prevent inconsistent/missing data entries. <i>Value added: Compliance, Efficiency, Risk Reduction</i>	05/31/2023
2.	Determine the reason of missing work history records identified for the 6,713 trees and update Arbor Access accordingly. <i>Value added: Compliance, Risk Reduction</i>	05/31/2023
3.	Determine the reason of missing qualifying tree service records identified for the 524 trees and perform appropriate follow-up actions. <i>Value added: Compliance, Risk Reduction</i>	05/31/2023
4.	Request Vendor to prepare an annual maintenance plan per contract requirement. <i>Value added: Compliance, Efficiency, Risk Reduction</i>	05/31/2023
5.	Request Vendor to reference job assignment Lists in invoices and enable export of Lists to spreadsheet for better invoice review process. <i>Value added: Compliance, Efficiency, Risk Reduction</i>	05/31/2023
Priority 3		
6.	Request Vendor to remove the six identified active users that no longer require access to Arbor Access and perform periodic review. <i>Value added: Risk Reduction</i>	Completed
7.	Request Vendor to invoice the City monthly per contract. <i>Value added: Compliance, Cost Saving</i>	Completed

C. Background

PWD is responsible for the maintenance of the City's parkway, park, and median trees. This includes planting, trimming, watering, removing, pest control, etc. The PWD uses a combination of contractual tree trimming services and in-house crew to maintain the City's urban forest.

The City generally utilizes in-house crew to handle resident requests, young tree care and emergency or priority response efforts; while the large-scale, grid-pruning, and preventative maintenance programs are generally assigned to Vendor.

Contract Overview

The City's current tree maintenance contract with Vendor became effective on July 20, 2020. The term of the agreement is for a period of six years, with two three-year extensions and may be terminated by either party with 30 days written notice. The total amount of the contract is not to exceed \$7,056,000. According to PWD, this amount was underfunded from the onset of the contract due to budgetary constraints.

Some of the key contract terms are as follows:

- Vendor shall, within thirty days or the effective date of the contract, prepare and submit a written annual maintenance calendar to the Urban Forester. This maintenance calendar shall clearly indicate all the major maintenance tasks required by this agreement and the month of the year they are scheduled to be performed.
- The City maintains its trees in cycled pruning of twelve geographic districts. Pruning typically consists of the completion of two districts each year, subject to the instructions of the Urban Forester, on regular six-year intervals.
- Tree trimming activities are itemized and mostly fixed price based on characteristics such as tree diameter.
- Vendor shall submit invoices for services performed once a month following the month in which the work was performed.
- Billing is to be by address, maintenance district, and include tree species, DBH (diameter at breast height), variety (Botanical and Common Names), trim date, and tree condition. This information shall be updated to Arbor Access within one month of work being completed.
- Vendor shall provide and operate, at no cost to the City, a tree inventory system (Arbor Access), that can record tree data. Vendor is to update the inventory regularly and make all necessary corrections according to the field records².

Tree Trimming Program

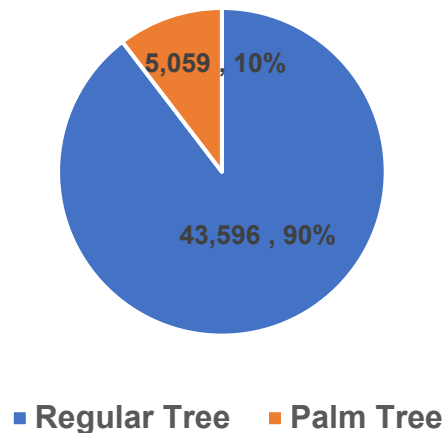
The PWD has an established goal to trim each broadleaf (regular) tree once every six years and every palm tree annually. Newly planted trees should be serviced at least once within the first year and once a year thereafter for the next four years, as part of a

² According to the contract, all aspects of the tree inventory system including, but not limited to, data entry, system maintenance, system hardware and/or software upgrades and server security and stability is the responsibility of the Vendor.

five-year Young Tree Maintenance Program. These trim cycles are in line with industry practices.

At the time of the audit, according to Arbor Access data, there were a total of 48,655 City planted trees that were subject to routine maintenance³. The chart below provides a breakdown of the two types of trees, regular trees and palm trees, that are subject to trim by the City:

City Trees By Type



The contract states that Vendor is responsible to prepare and submit a written annual maintenance calendar for the City. However, the City does not utilize this service and does all the planning and work assignments for both Vendor and in-house crew through utilization of the Arbor Access List feature. "Lists" are Arbor Access reports that allow both the City and Vendor to track specific jobs as they are assigned by the City.

Job Assignment and Billing

City assigns work to Vendor via Arbor Access Lists. Vendor invoice may include completed work from one or more assigned Lists. For calendar year 2021, there were 124 Lists assigned to Vendor for completion, of which 122 (98%) were completed within a year from the assignment date.

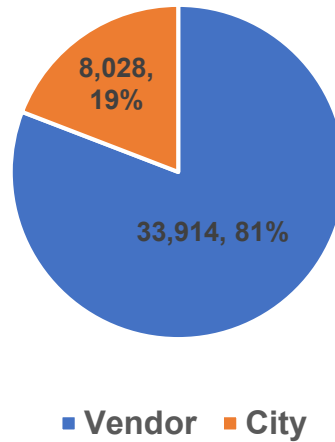
However, Lists are not referenced in the invoices. This creates difficulty to verify that the work invoiced are from the job assignment Lists approved by the City. Currently, the City staff perform reasonableness reviews based on general familiarity of the List assignments and/or periodic physical inspections. (See Observation #5)

³ Based on Arbor Access data extracted on February 2, 2022, there were a total of 58,257 trees, stumps, vacant sites, and non-City planted trees within the system. Excluding everything but City planted trees, there were 48,655 trees which were subject to trimming.

Tree Trimming Status

Of the 48,655 trees, 41,942 trees contained some type of work history. As shown in the chart below, of the 41,942 trees with work history, over 80% of the work performed was by Vendor.

Work Performed - Vendor vs. City



Of the 41,924 trees, 40,813 had applicable work histories and were tested for compliance with the one-year and six-year tree trimming goals for palm trees and regular trees, respectively. Of the 40,813 trees, 5,490 (13%) were not trimmed within the one-year and six-year requirements. The tables below provide a summary of the trimming delay by regular and palm trees:

Regular Tree Summary		
Trimming Status	Count	Percent of Count
On Schedule	32,912	92%
Up to 1 Year Delayed	1,278	4%
1-2 Years Delayed	1,106	3%
Over 2 Years Delayed	560	1%
Total	35,856	100%

Palm Tree Summary		
Trimming Status	Count	Percent of Count
On Schedule	2,411	49%
Up to 1 Year Delayed	790	16%
1-2 Years Delayed	1,673	34%
Over 2 Years Delayed	83	1%
Total	4,957	100%

Arbor Access Data Quality

According to the contract, Vendor shall provide and operate the Arbor Access tree inventory system and is required to update the inventory regularly and make all necessary corrections according to the field conditions. As mentioned earlier, both the City and Vendor may service trees. Regardless of who performs the work, Arbor Access should have the most current information (Inventory ID, address, maintenance district, tree species, tree diameter, and tree condition) for each tree site.⁴ Arbor Access should also contain all the service records for both valid (current) and invalid (no longer exist) trees.

However, Internal Audit noted various data inconsistencies within the Arbor Access database. These inconsistencies are detailed within Observation #1. For example, the inconsistencies noted between the Tree Condition and the Recommended fields. The tree condition and the recommended⁵ fields should be complementary. A tree condition of "Good" should not be associated with a recommendation for tree removal or disease.

The table below provides a tree condition overview for the 48,655 trees within the Tree Inventory:

TreeCondition	Count	Percent of Count
Fair	29,615	61%
Good	13,845	28%
Poor	2,383	5%
N/A	1,595	3%
Blank (no condition noted)	1,139	2%
Dead	78	1%
	48,655	100%

However, as noted in Observation #1, 650 of the 13,845 "Good" trees had recommendations related to diseased, removal, or poorly structured. According to Arbor Access's Inventory Methodology, poorly structured is a recommendation reserved for tree removals that "present above normal safety concerns, and the potential for tree failure cannot be mitigated through pruning."

These data fields are important for planning tree maintenance, especially when the City does not have the budget to trim all trees block by block following the recommended frequency.

⁴ Each Inventory ID within Arbor Access represents a specific tree site (location). Each tree site may have historical maintenance records associated with one or more trees. This audit was based on the current tree at each tree site.

⁵ The "Tree Condition" field should be updated at the time of service or evaluation. The various tree conditions are defined within Arbor Access. The "Recommended" field is used to state the service that the tree should receive.

D. Objective, Scope and Methodology

The objective of this audit is to determine whether the City has established adequate controls to ensure that the contract provisions are being appropriately followed by Vendor and the contract is appropriately administered by the City.

The scope of the audit covers primarily the period of calendar year 2021.

In order to accomplish the audit objective, Internal Audit performed the following:

- Interviewed City and Vendor personnel.
- Reviewed the West Coast Arborist Tree Trimming Contract.
- Conducted detailed testing of the contract related invoices.
- Performed data analytics on the Arbor Access database.
- Tested tree trimming compliance with the one-year and six-year frequency goals.
- Conducted site visits and validated trees against Arbor Access records on a sample basis.

Please note that the data analytics and tree trimming compliance test results may be impacted by the data quality issues noted within this report.

As a result of these audit procedures performed, seven observations were identified and are detailed in the Observations, Recommendations, and Management Responses Matrix beginning on the following page.

E. Observations, Recommendations, & Management Responses Matrix

Ref	Observation	Recommendation	Management Response
1.	Inconsistent/Missing Tree Condition		
Priority 2	<p>Upon review of the 48,655 City trees, the following data inconsistencies were noted:</p> <ol style="list-style-type: none"> 1) 1,139 (2%) trees had no Tree Condition. 2) 75 (.2%) trees with Tree Condition of "Dead", which should be removed, had a recommendation of "Routine", "N/A", or blank. 3) 2,238 (5%) trees with "Good" (650) or "Fair" (1,588) Tree Condition had recommendations to be removed and/or inspected due to disease. 4) 1,326 (3%) trees with Tree Condition of N/A, which is reserved for "stumps and vacant planting sites", had recommendations related to routine tree trimmings. 5) 86 (.2%) trees did not have the tree diameter noted. 6) 641 (1%) trees had a last work performed of "removal"; however, the Common Name field was not updated to reflect these as "Vacant Site" or "Stump". <p>Additionally, upon physical inspection of 10 judgmentally selected trees with "Poor" and "Dead" Tree Conditions, all 10 had different tree conditions.</p>	<p>PWD work with Vendor to perform the following:</p> <ol style="list-style-type: none"> 1) Correct the data inconsistencies. 2) Determine if input controls can be established within Arbor Access to prevent inconsistent/missing data entries. 3) Conduct periodic QC review of the Arbor Access database, such as through QC reporting, to identify and correct inconsistencies in a timely manner. 	<p>Agree and will implement by May 31, 2023.</p>

Ref	Observation	Recommendation	Management Response
2.	Missing Work History		
Priority 2	<p>Upon review of the 48,655 trees, Internal Audit noted that 6,713 trees did not have work history records.</p> <p>Upon inquiries, it was noted that 3,235 trees were maintained by the City's Community Services and Parks Department (CSP) and were recently transferred to Arbor Access. According to CSP, no work history was retained.</p> <p>The exact reason for the remaining 3,478 trees missing work history within Arbor Access was unknown. However, according to PWD, the work history records for some of these appear to be "dropped" when the tree addresses were modified, such as by adding a direction of south or east to the street name.</p>	<p>PWD work with Vendor to perform the following:</p> <ol style="list-style-type: none"> 1) Determine the appropriate action for the 3,235 trees that did not have work history information. 2) Determine the reason(s) of missing work history information for the 3,483 trees and update Arbor Access accordingly. 	<p>Agree and will implement by May 31, 2023.</p>

Ref	Observation	Recommendation	Management Response
3. Qualifying Tree Services			
Priority 2	<p>Upon review of the 41,942 trees with some type of work history, Internal Audit noted the following:</p> <ol style="list-style-type: none"> 1) 238 (.6%) trees only had non qualifying services (not a trim or planting) noted, which suggests trims were never performed on these trees. 2) 286 (.7%) trees were plantings without any work histories indicating "Young Tree Maintenance" took place, as required. 	<p>PWD review and determine the reason(s) for the identified trees without qualifying tree services noted and perform applicable tree services and/or update Arbor Access accordingly.</p>	<p>Agree and will implement by May 31, 2023.</p>
4. Tree Trimming Plan			
Priority 2	<p>According to the contract, Vendor is required to provide the City with an annual tree trimming plan. However, PWD does not utilize this service and performs the planning in-house.</p>	<p>PWD assess whether it would be beneficial to request Vendor to provide an annual tree trimming plan for the City, including to create Lists for City's review and approval.</p>	<p>Agree and will implement by May 31, 2023.</p>

Ref	Observation	Recommendation	Management Response
5. Job Assignment Lists			
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Priority 2</p>	<p>Upon sample review of invoices from calendar year 2021, Internal Audit was able to verify the rates billed in the invoices were based on contract rates. However, Internal Audit was not able to verify whether the work billed were assigned by the City, because there is no List reference in the invoices.</p> <p>Additionally, the Lists cannot be filtered by percentage of completion, within Arbor Access, and the complete listing of Lists is not exportable to a spreadsheet as required by the contract.</p>	<p>PWD request Vendor to add List reference to invoices and/or enable the complete listing of Lists to be exported to Excel for more efficient invoice review process.</p>	<p>Agree and will implement by May 31, 2023.</p>

Ref	Observation	Recommendation	Management Response
6. Arbor Access System User Access			
Priority 3	<p>Upon review of active users to Arbor Access, Internal Audit noted the following six employees should have their access removed:</p> <ol style="list-style-type: none"> 1) Four terminated employees; and 2) Two active employees who no longer required access due to changes of their job function. <p>Please note that Arbor Access is a Vendor hosted system that is not connected to the City's network.</p>	<p>PWD work with Vendor to perform the following:</p> <ol style="list-style-type: none"> 1) Remove the six identified active users that no longer require access. 2) Send deprovision request to Vendor for employees who no longer require access. 3) Request Vendor provide the City active users listing periodically to be reviewed by PWD for appropriateness and timely removal. 	<p>Agree and has performed the following prior to report issuance:</p> <ol style="list-style-type: none"> 1) All six users were deactivated. 2) Will send deprovision request to Vendor when employees no longer require access. 3) User access listing will be provided by Vendor and reviewed by PWD quarterly.
7. Billing Frequency			
Priority 3	<p>The contract states Vendor shall bill the City once a month. However, the Vendor bills the City twice a month, which results in additional costs for the City.</p>	<p>PWD request Vendor to follow the contracts billing frequency of once a month.</p>	<p>Agree and will start to bill the City monthly in the December 2022 invoice.</p>

Appendix 1: Definitions of Priority Rankings and Value-Added Categories

Definitions of Priority Rankings

The priority rankings are assigned by internal auditors based on their professional judgment. They are also agreed to by management based on their evaluation of the alignment with the strategic goals, priorities, and available resources. A timeline has been established based on each priority ranking:

- a. **PRIORITY 1** - Critical control weakness that exposes the City to a high degree of combined risks. Priority 1 recommendations should be implemented within **3 months** from the first day of the month following report issuance or sooner if so directed.
- b. **PRIORITY 2** - Less than critical control weakness that exposes the City to a moderate degree of combined risks. Priority 2 recommendations should be implemented within **6 months** from the first day of the month following the report issuance or sooner if so directed.
- c. **PRIORITY 3** - Opportunity for good or better practice for improved efficiency or reduce exposure to combined risks. Priority 3 recommendations should be implemented within **9 months** from the first day of the month following the report issuance or sooner if so directed.

Definitions of Value-Added Categories

The four value-added impact categories are defined based on their impact from the audit recommendations:

- a. **COMPLIANCE** - adherence to laws, regulations, policies, procedures, contracts, or other requirements.
- b. **COST SAVING** - lower the costs related to conducting City business.
- c. **EFFICIENCY** - ability to avoid wasting resources (money or time) in achieving goals.
- d. **RISK REDUCTION** - lower the risks related to strategic, financial, operations and compliance.