

**Presentation to the Audit Committee  
on May 3, 2019, Agenda Item AU2.4**

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GENERAL**  

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**TORONTO**

# **Review of Urban Forestry – Ensuring Value for Money for Tree Maintenance Services**

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# Background

10.2 million  
trees providing  
18,000  
hectares of  
canopy



# Background

- Urban Forestry is responsible for protecting, maintaining, and enhancing the urban forest
- Our first audit report was issued in June 2018 on permit issuance and tree by-law enforcement functions
- This second report focuses on tree planting and maintenance



# Background

- Urban Forestry currently uses both in-house City crews and crews from 3 contractors to perform tree maintenance work
- City paid about \$1.7M a month (\$20M a year) for the contracted maintenance services in 2018 in addition to the cost of in-house City crews





# Compliance with Tree Planting and Maintenance Service Standards

- High compliance with storm cleanup requests (97%)
- Reasonably good compliance with tree pruning requests (90%) and tree planting requests (88%)
- Low compliance with tree removal requests (62%)



# Key Management Responsibilities

- Responsibilities of Urban Forestry Forepersons:
  - Assign tree maintenance work to each crew
  - Review and approve the daily log for “*accuracy, productivity and completeness*”
  - Conduct the minimum number of random on-site, and quality control inspections per week
- Have the right to request GPS reports from contractors as part of the contract provisions



# An example of a daily log

**TORONTO** DAILY WORK ACTIVITY REPORT / LOG / CVOR RECORD Page 1 of 1  
(ALL FIELDS ARE MANDATORY)

CREW / GENERAL INFORMATION FORESTRY DISTRICT: please circle your area - ALHB, FEE, FEW, FNE, FNV, FSE, FSW, **(FWE)**, FWW

CONTRACTOR COMPANY NAME: CREW TYPE: *Type 1*

DATE (dd-mm-yy): WEATHER CONDITIONS: *Cloud*

RECORD OF DUTY STATUS - 7 day cycle (70 hrs / CYCLE #1) CITY CREW - NORMAL SHIFT HOURS - MONDAY TO FRIDAY, 7:00 AM TO 3:00 PM  
CONTRACTOR - NORMAL SHIFT HOURS - MONDAY TO FRIDAY, 8:30 AM TO 2:00 PM

Max # hrs DR-CVOR / day = 13 hrs, Max # hrs O.D / day = 14 hrs LEGEND DR = DRIVING - CVOR EQUIP.; O.D. = ON DUTY, NOT DRIVING, CVOR

PRINT EMPLOYEE NAME (Last Name, First Name) TOTAL WORK HOURS DR - # HRS CVOR O.D. - # HRS CVOR OFF - # HRS O.T. - # HRS COMMENTS (If applicable, identify if you are working with another crew)

Crew Leader: *[Signature]* 8 1

2. *[Signature]*

3.

4.

5.

CREW LEADER SIGNATURE: *[Signature]*

EQUIPMENT / VEHICLE NUMBER INFORMATION

AERIAL TRUCK # *3002286* CHIPPER # *6602541* POLE SAW # DAILY PRE-TRIP INSPECTION REPORT (all equip / vehicle):  
TRUCK UNIT # STUMPER # CHAIN SAW # *257357* SCHEDULE # 1 OF PRE-TRIP COMPLETED:  
CRANE # TRAILER # OTHER TAILBOARD COMPLETED FOR EACH WORK LOCATION

WORK ACTIVITY: *TSD*

WORK LOCATION - MUNICIPAL ADDRESS AND WORK ORDER # (SR # if WO # is not available)	TIME IN	TIME OUT	POS #	DIA	SPECIES	TRIM	REMOVE	STUMP	SEED	REPAIR	MAINT	INSPECTION	OTHER	WO Completed (Y/N)
<i>Revelle Yard</i>	<i>6:30</i>	<i>6:45</i>												
<i>DB</i>	<i>6:45</i>	<i>7:15</i>												
<i>DB</i>	<i>7:15</i>	<i>7:30</i>												
<i>Address #1</i>	<i>7:30</i>	<i>-</i>	<i>30</i>	<i>50</i>	<i>Heavy Spruce</i>		<input checked="" type="checkbox"/>							<i>Y</i>
<i>910P7309</i>	<i>-</i>	<i>9:30</i>												
<i>Address #2</i>	<i>9:30</i>	<i>-</i>	<i>30</i>	<i>50</i>	<i>Heavy Spruce</i>			<input checked="" type="checkbox"/>						<i>Y</i>
<i>908P7311</i>	<i>-</i>	<i>1:00</i>												
<i>Lunch</i>	<i>1:00</i>	<i>1:30</i>												
<i>DB</i>	<i>1:30</i>	<i>1:45</i>												
<i>DB</i>	<i>1:45</i>	<i>2:15</i>												
<i>DV</i>	<i>2:15</i>	<i>2:45</i>												
<i>ft</i>	<i>2:45</i>	<i>3:00</i>												

UF Foreperson / Supervisor: Name (print): *[Signature]* Signature: *[Signature]* Date: *[Signature]*

Form Date: September 2014

Tree service address and work order number

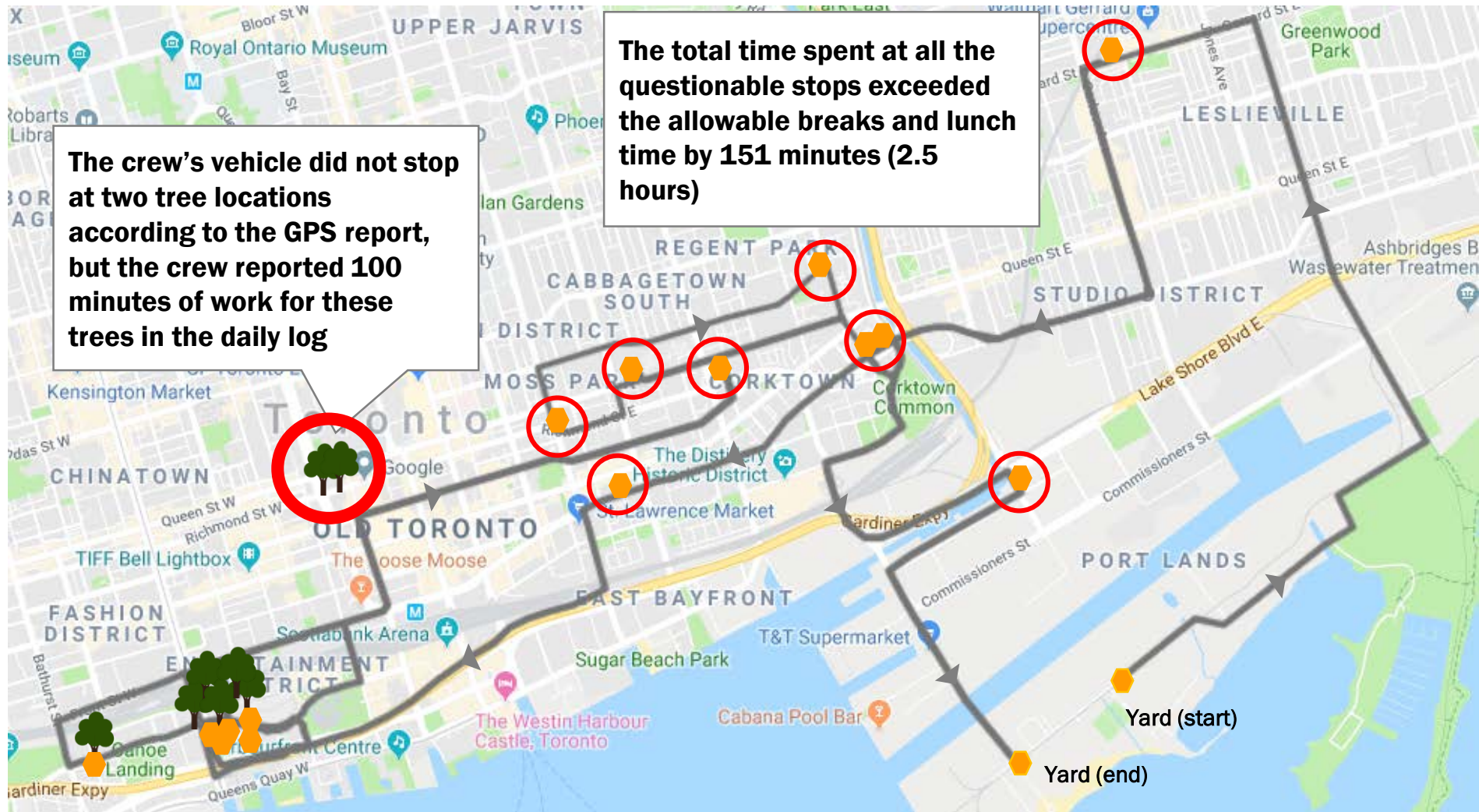
The crew must record each tree service address and the related work order number in the daily log.

The crew uses standard codes to record time spent on other activities:

BR - Break  
DR - Driving time  
DU - Dumping (wood)  
EVR - Equipment/ Vehicle Repair/ Maintenance  
HO - Hold off (for hydro)  
LU - Lunch  
PC - Parked cars  
YT - Yard time  
OT - Other



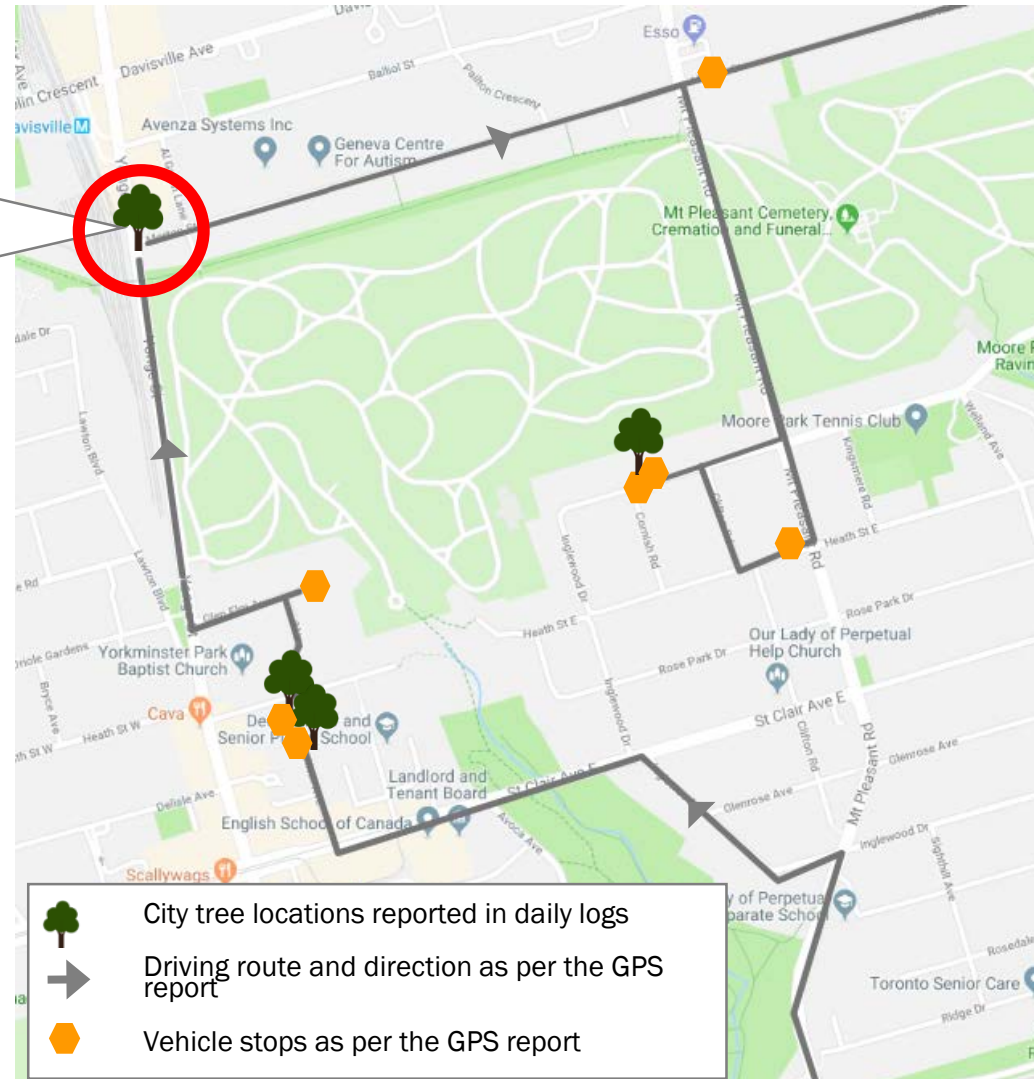
# Map 1 – Crew's vehicle did not stop at some tree locations and the crew went to locations that appear to be non-work related



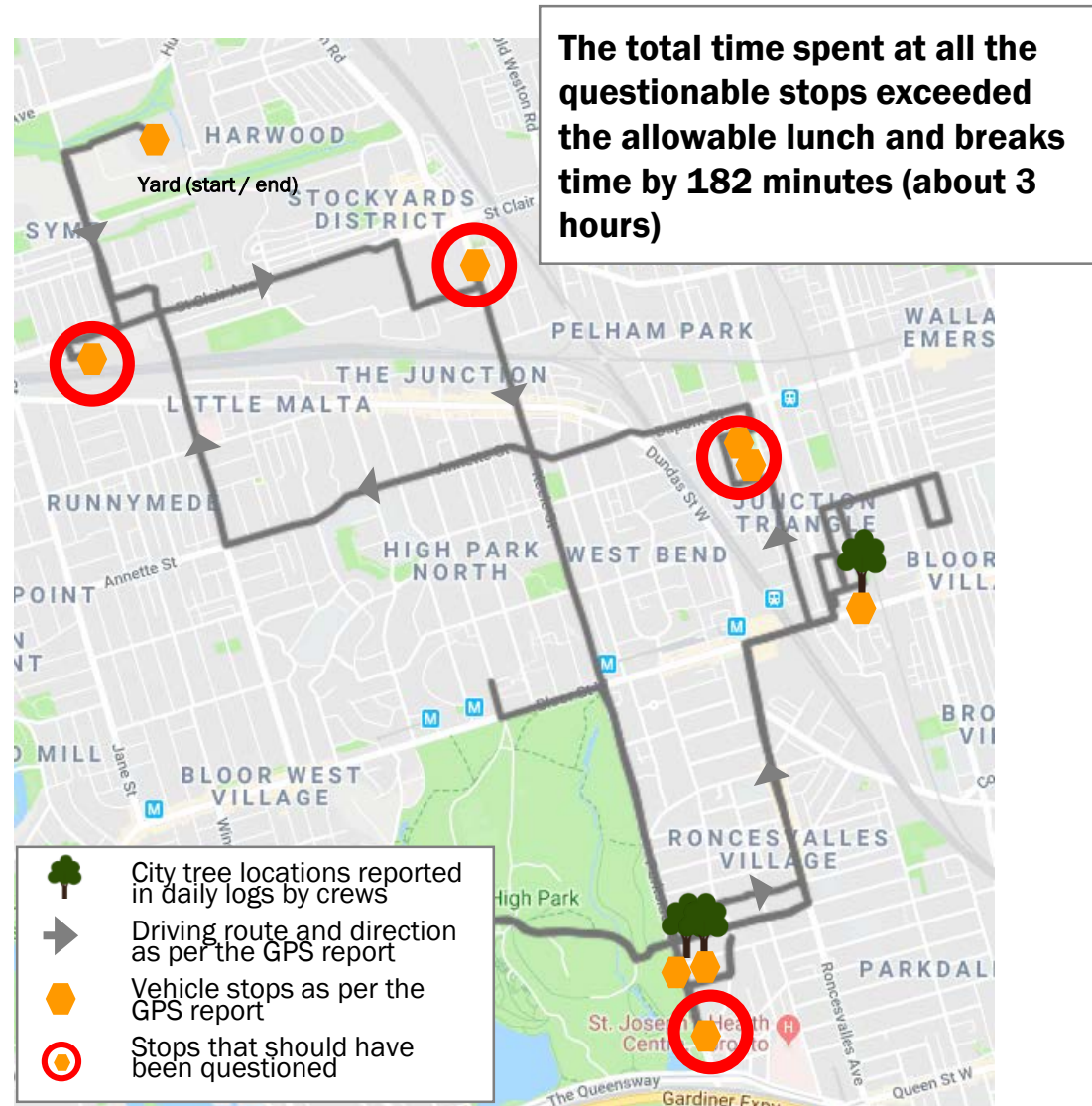


## Map 2 – Crew's vehicle did not stop at or nearby the tree service location

The crew drove by this tree location according to the GPS report, but reported 45 minutes of work on this tree in the daily log



## Map 3 – Crew's vehicle stopped at several locations for a considerable amount of time that appear to be unrelated to City work

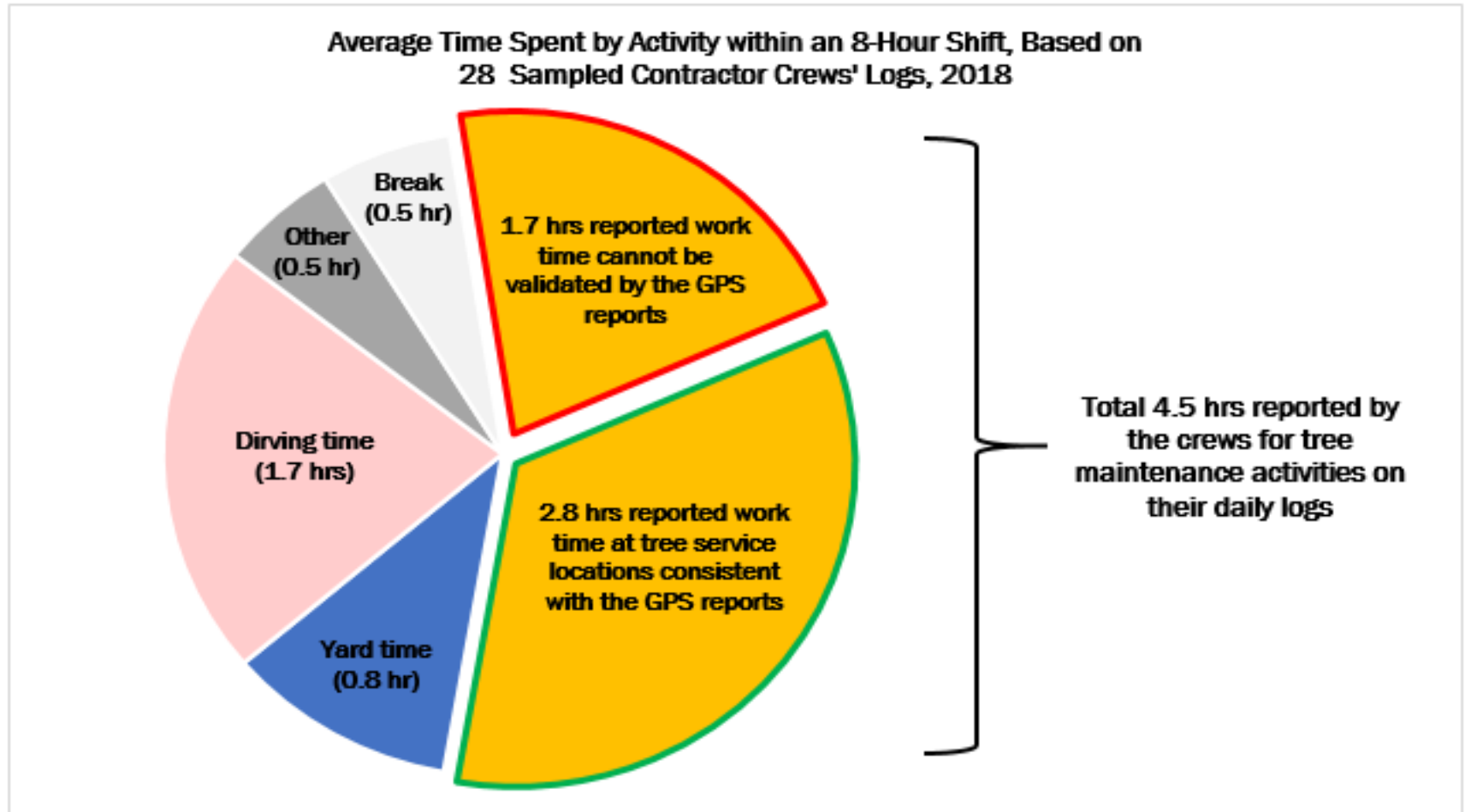


## Map 4 – Crew drove a long distance and spent a large amount of time at what appear to be non-work related locations





# Daily Logs and GPS Reports Comparison



Similar comparative analysis could not be performed on Urban Forestry's in-house City crews because their vehicles are not equipped with a GPS system

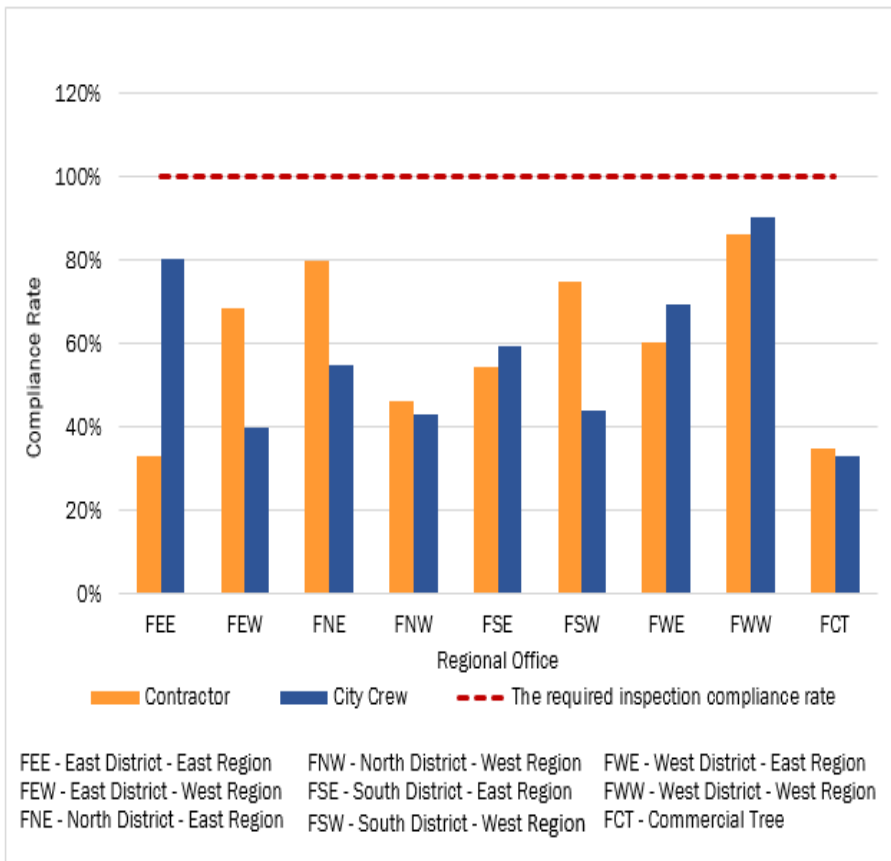
# Certain Entries in Daily Logs should have been Questioned

- 57 of the 139 daily logs (41%) from both City and contractor crews have missing data or entries that should have been questioned:
  - duplicate work in multiple logs from the same crews
  - indicated activities such as watering, pruning, or unspecified activities on dead trees, locations with no tree, a tree stump, trees where work had already completed, or no work needed
  - Missing work orders or service requests to support work performed
  - Incomplete information (missing tree position or species information)
  - Missing Foreperson's approval

# Effectiveness of the Inspection Program can be Improved

The required minimum number of inspections were not met in 2017 and 2018

On-site inspections completed for City and contractor crews, 2018



Quality control inspections completed for City and contractor crews, 2018





# **Effectiveness of the Inspection Program can be Improved**

- Most of the Forepersons we interviewed would call the crews prior to visiting the site
- Inspections were usually done in the morning but the activities that should be questioned usually occurred in the afternoon

# Opportunities to Improve Operational Efficiency

- A considerable amount of time was spent on supporting activities
- From the 139 daily logs (59 City crews and 80 contractor crews) we reviewed, the crews reported the following average time spent on supporting activities:

Activities	Average Time Spent within an 8-hour shift (as reported on Daily log by crews)
Yard Time	53 minutes
Driving Time	93 minutes
Waiting for Parked Vehicles to be moved	Ranged from 15 minutes to 3.5 hours (reported on more than a quarter of the sampled logs)
Wood Disposal	20 minutes (not include driving time to the woodchip compound)
Equipment or Vehicle Malfunctions	76 minutes (7 of the 59 City crew logs)

# Going forward

10 recommendations to help Urban Forestry to improve contract management, customer service and operational efficiency for its tree planting and maintenance programs





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