



CITY OF
RIVERSIDE

**Municipal Approaches
to General Liability Claims
Related to City-Owned Trees
and Residential Sewer Laterals**

**City of Riverside – Internal Audit Division
April 2019**

Municipal Approaches to General Liability Claims Related to City-Owned Trees and Residential Sewer Laterals

At the request of the previous City Manager, the Internal Audit Division conducted an internal performance assessment of the current general liability claims policies and practices related to residential sewer laterals, City-owned trees and related costs absorbed by the City.

We reviewed related City policies and practices, case law, costs related to general liability damage claims caused by City-owned trees to sewer laterals in residential areas, best practices in other municipalities, and interviewed management in Public Works.

In addition, we discussed our findings and various options/recommendations with each City Council member. The April 2019 report provides the most favorable recommendations that have the potential if implemented to reduce the overall general liability repair costs caused by City-owned trees related to residential sewer laterals.



Overview

Trees absorb and trap airborne air pollutants (carbon monoxide, sulfur dioxide, nitrogen oxide and small particulate matter). Trees reduce wind speed which allows more particulates to settle out of the air. Trees cool the air by providing direct shade and releasing water in the form of vapor.

Trees combat the urban “heat island” effect according to the US Environmental Protection Agency (EPA). “The term “heat island” describes built up areas that are hotter than nearby rural areas. The annual mean air temperature of a city with one million people or more can be 1.8–5.4°F (1–3°C) warmer than its surroundings. In the evening, the difference can be as high as 22°F (12°C). Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and mortality, and water quality.” (EPA, May 2011)

Through the process of photosynthesis, trees produce oxygen. Trees capture, absorb, and slow down rainfall and stormwater runoff, thereby reducing the total amount of runoff and spreading the flow of water from storm events over a longer period of time (delaying peak flow). Without trees, cities would be more vulnerable to flooding and would need to spend more on heavily engineered stormwater drainage and sewage systems to cope with increased runoff.

Wind, rainfall and stormwater runoff cause soil erosion. Tree roots hold soil in place and increase the ability of the soil to accept water. Tree leaves reduce the wind and decrease the force of the rain as it hits the ground. By providing these benefits, the cost for cities to process and clean sediment from stormwater is greatly reduced.

Trees shade and protect asphalt pavement and extend the longevity of the road bed. A study of street pavement in Modesto, California showed that an unshaded street required 6 slurry seals over 30 years while a street with large shade trees required only 2.5. "20% shade on a street improves pavement condition by 11%, which is a 60% savings for resurfacing over 30 years."¹

Trees provide much needed food and shelter for squirrels, birds, insects, spiders and many other species important to a healthy ecosystem. Trees also provide refuge to many important migratory bird species to roost en route to and from their breeding grounds.

Trees can be planted and maintained to create privacy, screen a view, reduce harsh glare, and buffer urban noise.

Studies show that tree-lined business districts are places where visitors have a more favorable experience. More shoppers frequent, shop longer, and spend more in business districts with trees. Planting and providing proper maintenance for street trees in commercial districts boosts the local economy and is a smart business investment.



Riverside's Urban Forest

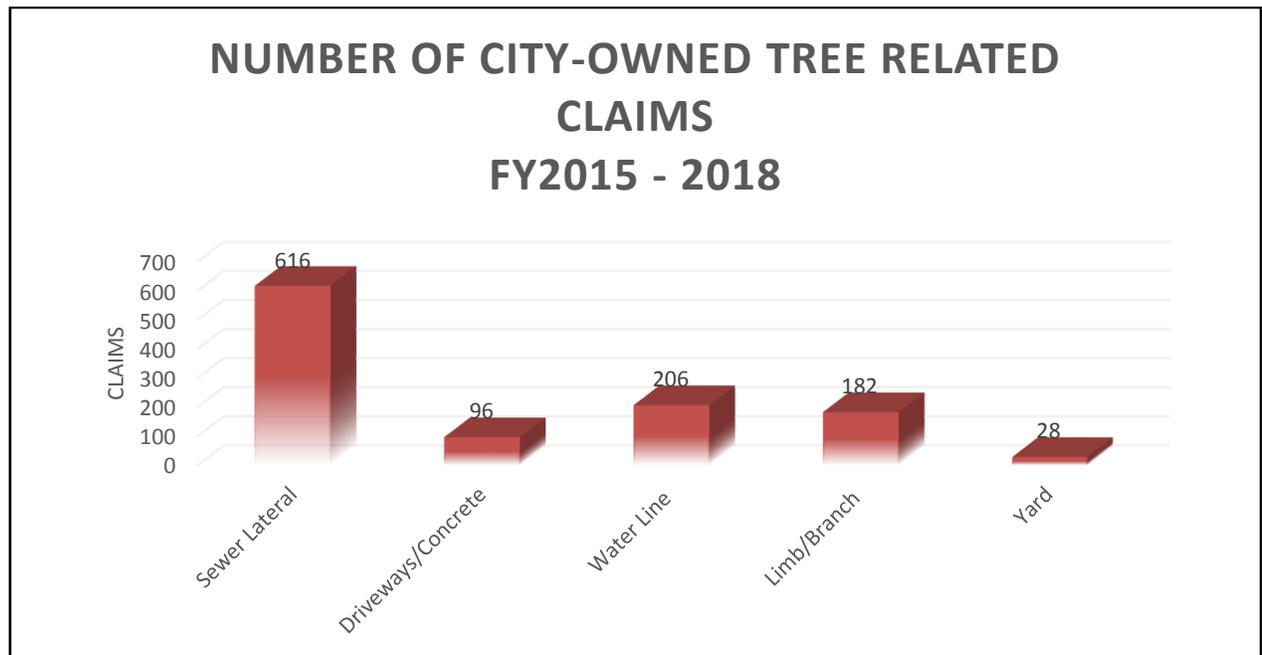
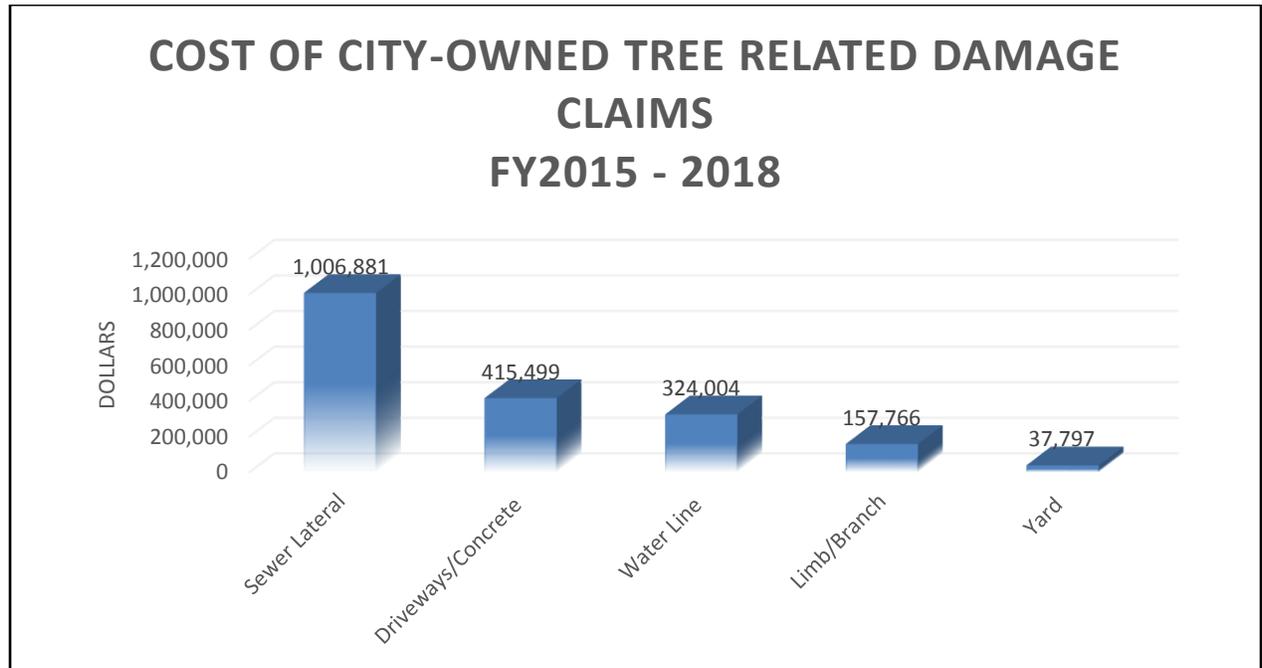
The City of Riverside is committed to promoting the growth and care of its "urban forest." According to a March 12, 2015 report by the Public Works Department to the Utility Services/Land Use/Energy Development Committee, there are approximately 150,000 street trees within the public right-of-way, of which approximately 135,000 are within parkways, along the front or side of homes/businesses. 15,000 trees are located within medians, parkways, and other reverse frontage areas maintained by the City.

Having a canopy of trees that improves the appearance of our urban neighborhoods, provides shade, and improves the quality of the air can have a significant financial impact when there is damage to City sewer lines, water lines, sidewalks and private property.

The City receives an average of 4,400 service calls annually about trees. Nearly half the calls are for broken or fallen limbs or a request to trim an overgrown tree.

¹ *Why Shade Streets - The Unexpected Benefit* by the Center for Urban Forest Research, October 2006.

For the three (3) fiscal years ending June 30, 2018, the City incurred \$1.9 million in damage costs for 1,128 claims related to City-owned trees². 52% (approximately \$1 million) of the expense and 55% of the claims was related to damage caused by City trees to sewer laterals. The following charts provide a summary overview of claim expenditures and number of claims for the past three (3) fiscal years ending June 30, 2018.



² Data provided by Carl Warren & Company, the City's third-party risk management liability claims administrator.

Tree Roots and Sewer Line Intrusion

Generally, a residential sewer lateral is 4 to 6 inches in diameter and is made of vitrified clay, PVC, ABS or iron pipe. The sewer lateral is anywhere from 2 to 6 feet underground and runs from the residence to a main line connection in the street. There are various joints along the lateral and where the lines connect to the residence and the main line under the street. These joints generally use rubber or other soft material to seal the connections.

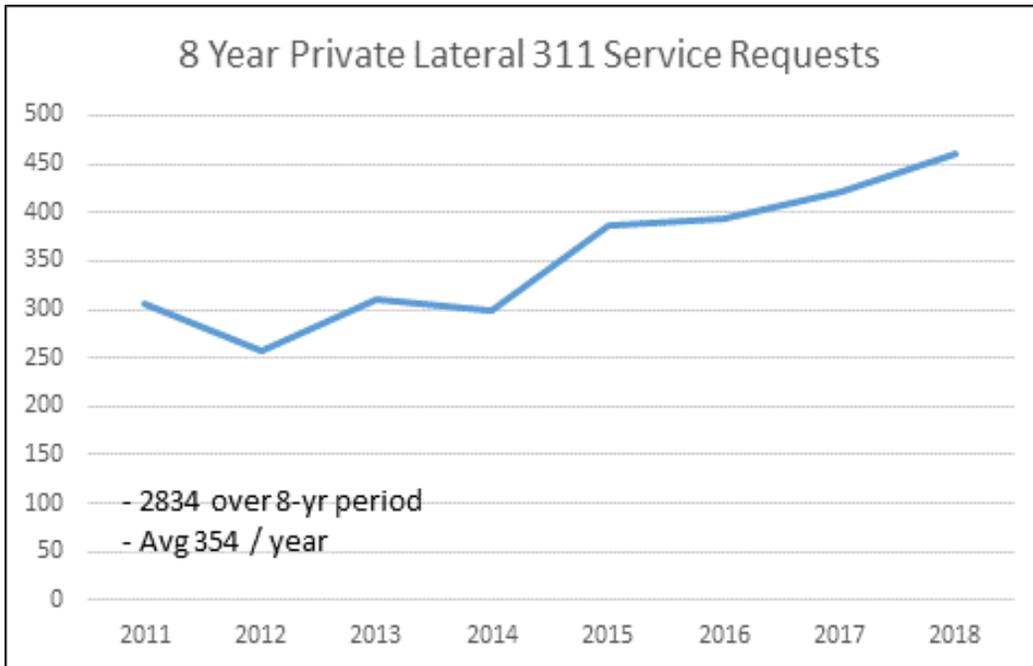
Trees, bushes and plants need water and nutrients in order to survive and will seek out the easiest source of water and nutrients. Generally, when roots encounter the sewer lateral, nothing will happen because they will grow over and around the lateral. However, if there is a leak, no matter how small, tiny hair like roots will enter the lateral and rapidly grow on the nutrient rich material. Eventually, these roots may block the lateral and back-up the system. Tree roots growing inside sewer pipes are generally the most expensive sewer maintenance. Roots from trees growing on private property and on parkways throughout the City are responsible for many of the sanitary sewer service backups and damaged sewer pipes.



The Shamel ash trees that line the streets in some areas of the City of Riverside are among those trees that send out feeder roots rather than a tap root. Feeder roots search out the easy water, which usually happens to be along the surface. In some areas of the City, like the “Wood Streets” neighborhood in Ward 1, the Shamel ash trees were planted decades ago in large lawns that extend to the curb (no sidewalks). Shamel ash trees have been the source of claims filed by residential property owners more than any other type of tree – for uprooted sidewalks and driveways, sewer pipes broken by their roots.

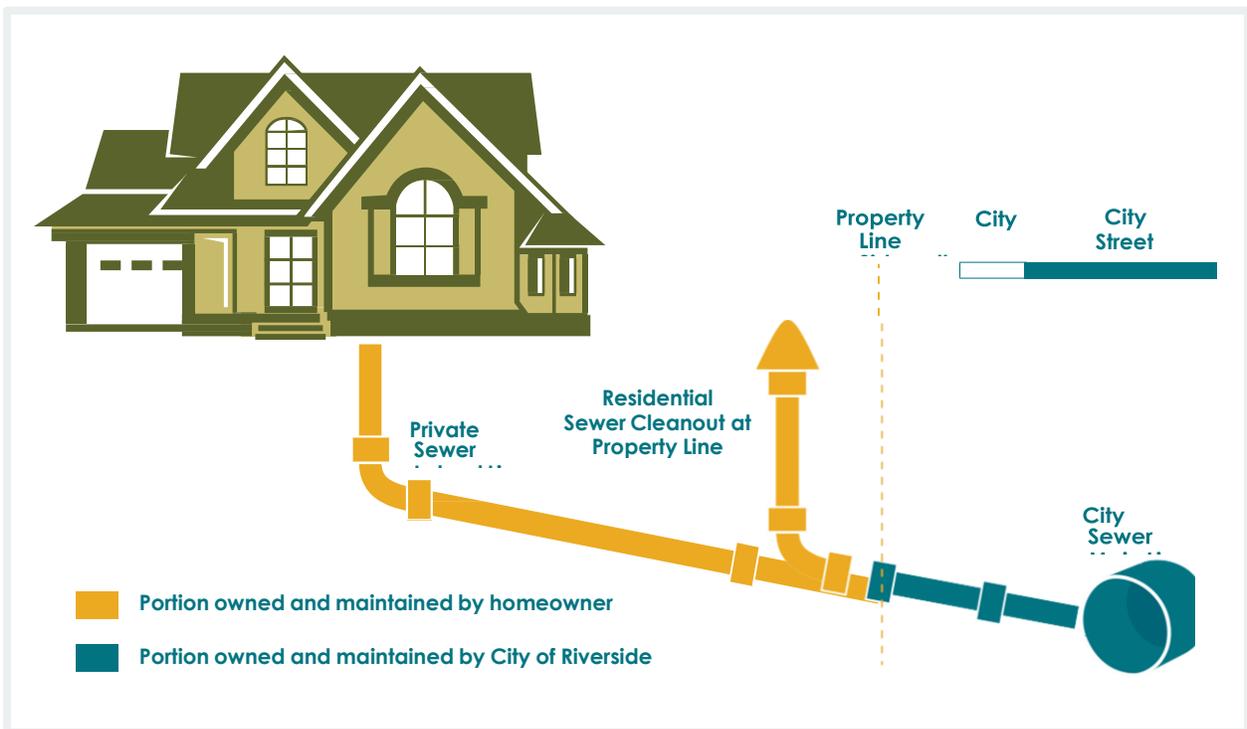
The City’s wastewater (sewer) collection system includes over 820 miles of public pipelines and 414 miles of sewer laterals (public and private). When budgets are tight, inspections, maintenance, repair or replacement is often deferred. As a result, there can be a deluge of pipe problems and failures including sewer breaks, blockages and backups. Not only do these failures have an impact on third parties and the environment, but can cost the City huge losses and damages.

The chart below indicates that the service call volume for private sewer laterals has significantly increased in the past eight (8) years.



Source: City of Riverside 3-1-1 Call Center.

In 2008, the Municipal code was changed - sewer lateral lines from the property line to the City sewer main line were transferred from the private property owner to the City. The City's adopted sewer rates do not include funding for sewer lateral maintenance and repair costs.



Who Pays for Damages?

Riverside Municipal Code

Section 14.08.020 - Maintenance of house sewer connections – Right of entry of inspectors

A. All residential and non-residential customers shall maintain their private sewer lateral line in good working order and free of defects (which include the installation of a clean out for maintenance at the property line) at their own expense and shall be liable for damages which may result from failure to do so.

B. City shall maintain the sewer lateral of residential premises (excluding non-residential premises) beginning at the property line to the point of connection to the City Sewerage System.

C. City inspector and/or City contractor shall be admitted at all reasonable hours at all parts of any premises connected with the sewerage system for the purpose of checking any facilities mentioned in this chapter and establishing sewer service charges as provided in Chapter 14.04. (Ord. 7362 § 6, 2017; Ord. 7005 § 1, 2008; Prior code § 27.14)

Responsibility for damage to the sewer lateral caused by City trees depends on why the roots entered the sewer lateral. Generally, and based on industry experience, a broken or misaligned sewer line allows roots to intrude into the sewer lateral. Roots typically do not break sewer lateral lines. The City should only be responsible for private sewer lateral damages, in the rare occurrence when the City has determined that tree roots from a City tree have misaligned or broken the sewer lateral. In all other cases, the City is not responsible. Earth movement, normal expansion and contraction of the soil, defective construction, improper maintenance, and private property tree roots can cause the sewer lateral to misalign, allowing roots to enter at the joint or connection.

Parkways are the public right-of-way from the back of the curb to the private property line and can include landscaping and/or sidewalk. Standard widths vary from 5 feet to 10 feet depending on the type of street (i.e., primary, secondary, residential, etc.). The City owns and maintains many thousands of trees in these parkways, but the presence of a City tree in the parkway does not automatically mean the City is responsible for the damage.

The City is responsible for damage to a homeowner's sewer lateral when the City tree's roots misalign or wrap around it and break or crush the pipe itself. However, if the roots entered at the joint due to the sewer lateral being misaligned, or due to root intrusion caused by lack of maintenance or repair of a defective private sewer lateral line, the homeowner is responsible. The homeowner must pay for the excavation of their private sewer lateral line.

However, if the City contractor determines the City tree caused the damage to the sewer lateral, the City will then pay for the repair of the portion of the line damaged and the portion of the excavation needed to expose the damaged sewer lateral. If the roots entered due to the sewer lateral being misaligned, defective or for any other reason, the homeowner is responsible for the entire cost of excavation and repair of their sewer lateral line. If the City does pay for a portion of the private lateral repair but the homeowner has the entire line replaced, the homeowner is responsible for paying for the rest of the replacement and the portion of the excavation not related to the repairs the City pays.

Best Practices

The City of Los Angeles³

The City of Los Angeles policy is that the "...responsibility for the construction, maintenance, and repair of house connection sewer laterals lies with the property owner." The LA City Attorney states, in part, "...that this rule is not altered by the fact (if it is a fact) that roots of trees growing in the street caused clogging of the sewer line. The privilege is granted to a home owner to connect a sewer lateral to the publicly owned main sewer and the duty to keep the privately owned sewer lateral clean rests upon the owner of such house connecting the lateral, not upon the City. House connection sewer laterals are not of general benefit since they serve and can be used legally to serve only a single lot. The fact that the house connection sewer is in a public street does not mean that it is of public benefit or the maintenance and repair should be performed by City forces at the taxpayer's expense."

The City notes that, "In almost all cases, the private property owner is assumed to own to the center of the street. The public street is an easement. The property owner has a legal right to construct and maintain a house connection sewer between his private property and the public street sewer, subject to permit provisions of the Los Angeles Municipal Code."

East Bay Municipal Utility District Private Sewer Lateral Program⁴

In 2009, the United States Environmental Protection Agency (EPA) and the California Regional Water Quality Control Board ordered the East Bay Municipal Utility District (EBMUD), the six cities that make up the greater Bay Area and one sewer district to fix old, cracked sanitary sewer pipes. The EPA's mandate compelled EBMUD and its partners to phase in a Regional Private Sewer Lateral (PSL) Ordinance beginning in 2011. Affected property owners must repair their private lateral lines as part of a home sale transaction or significant building remodel. Property owners obtain a certificate from EBMUD certifying that all of their laterals are leak-free. Property owners may also voluntarily choose to have their laterals tested and certified outside of a home sale.

In reviewing policies by other California cities and two municipal water districts, most cities⁵ require the property owner to maintain the entire sewer lateral all the way to the sewer main, as it is not easy for a City to maintain the lateral lines since the clean-out is not on the public

³ Retrieved from https://bss.lacity.org/urbanforestry/index_residentsewerlines.htm.

⁴ Retrieved from <http://www.eastbaypsl.com/eastbaypsl/index.html>.

⁵ Refer to Attachment A.

right-of-way. The City must rely on the property owner to contact the City when an issue arises. It is then up to the City to inspect the sewer lateral line and clean-out to determine if the problem is the responsibility of the City or the property owner.⁶

Recommendations

Based on discussions with each City Council member and executive management regarding the various municipal approaches to General Liability Claims due to residential property damage related to City-owned trees and residential sewer laterals, we recommend the following be considered for approval by the City Council:

Residential Sewer Laterals⁷

1. Revise Municipal Code Section 14.08 – Sewer Connections and Permits – (a) to clarify responsibility regarding tree root intrusion into private sewer lateral lines; and (b) to require the inspection and repair of private sewer lateral lines upon a change of residential property ownership or when a significant building remodel occurs.

(1) Section 28: Section 14.08.020 of the Riverside Municipal Code (amendments shown in **Bold**) as follows:

A. All residential and nonresidential customers shall maintain their private sewer lateral line in good working order and free of defects which includes the installation of a **two-way** clean out tee at the property line **or City easement boundary of at least four (4) inches in diameter** for maintenance at their own expense and shall be liable for damages which may result from failure to do so. **Private sewer lateral lines are required to be free of defects and any infiltration of tree roots into a private sewer lateral are presumed to be caused by improper installation and/or maintenance and shall be repaired by the property owner at no cost to the City, unless determined otherwise by a City inspector and/or City contractor.**

(2) According to the Public Works Department, there currently is no proactive program for sewer lateral inspection and repair. The existing reactive approach is costly and results in repeated call outs and damage claims. The proposed RMC change would require the inspection and repair of private sewer laterals as part of a residential property sale or significant building remodel. During this inspection, the City can inspect and repair City-owned sewer laterals. The result is a fully functional lateral from the home to the street that should last 20-30 years or longer. A proactive program over time will dramatically reduce call outs and claims due to sewer lateral defects and trees.

⁶ Refer to Attachment B – Flowchart of Sewer Claims Process.

⁷ For “non-residential” property owners no changes are proposed, as non-residential property owners are responsible for the sewer lateral from the building to the City’s main line.

This recommendation will require outreach to the residential real estate businesses within the City and the Chamber of Commerce. Disclosure of the sewer lateral inspection and any repairs (certification from home owner) would need to be attached to the property title.

2. As part of the next Sewer rate plan proposal consider adding a charge to sewer rates for the repair and maintenance of City sewer lateral lines damaged by City-owned trees.

The City would coordinate repair of the City's portion of the sewer lateral with the private portion as part of the home sale or significant building remodel, as noted in Recommendation #1.

Consider adding a \$0.05 charge per month per sewer account. This revised charge would be considered as part of the next sewer rate plan development that is underway as part of the Wastewater Master Plan update project. By adding \$0.05 per month, \$500K could be raised to cover the unfunded cost of repairing the City's sewer laterals. However, this charge would have to be reviewed to ensure compliance with Proposition 218.

We sincerely appreciate the cooperation extended by the Public Works Department executive management and the City Council members for their input and feedback during this assessment. Should you have any questions regarding this assessment, please contact the Internal Audit Division.

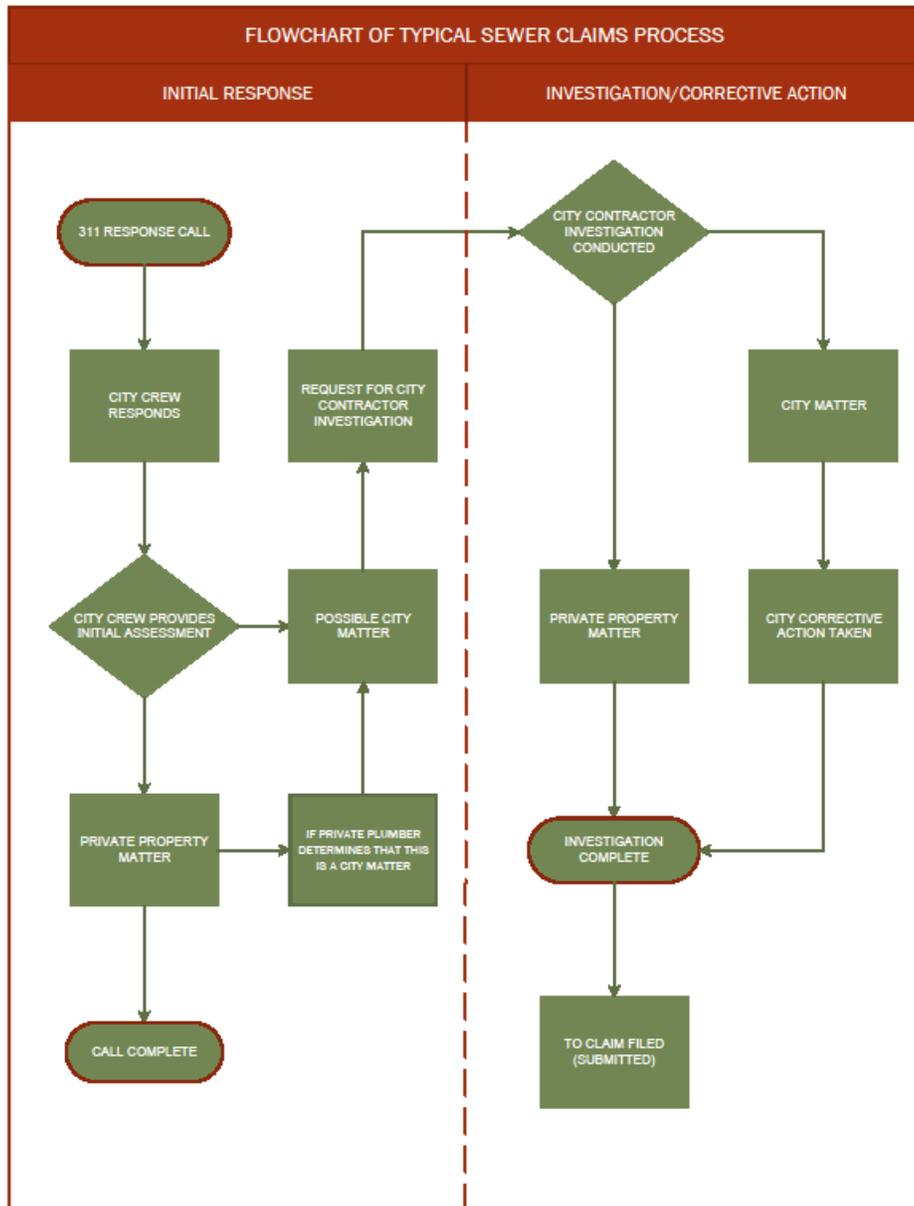
ATTACHMENT A

Sewer Lateral Line Maintenance Practices of Other Cities/Agencies

City/Agency	Home/Business to Property Line	Property Line to Sewer Main
Banning, Chino, Colton, Corona, Loma Linda,	Property Owner	Property Owner
Fontana	Property Owner	City unless damage is caused by owner
Eastern and Western	Property Owner	Property Owner
Riverside	Property Owner	City

Source: March 12, 2015 Public Works report to Utility Services/Land Use/Energy Development Committee.

ATTACHMENT B



Source: City of Riverside Risk Management Division.