

Annual Report* FISCAL YEAR 2018 / 2019

*Revised report. See Data Disclosure Statement on website.



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San Francisco Public Works: Mission and vision

San Francisco Public Works enhances the quality of life in San Francisco by providing outstanding public service. We design, build, operate, maintain, green and improve the City's infrastructure, public right of way and facilities with skill, pride and responsiveness in partnership with the San Francisco community.

Bureau of Urban Forestry: mission and vision

The Bureau of Urban Forestry enhances the City's green infrastructure by preserving, replacing and growing the trees and plants that make up our urban forest. The bureau also repairs tree-related sidewalk damage.

StreetTreeSF Overview

In November 2016, San Francisco voters approved Proposition E, a ballot measure that transferred responsibility for the maintenance of the City's street trees and tree-related sidewalk damage from property owners to San Francisco Public Works. The proposition established a dedicated annual fund (\$19.7 million in FY 2018/19) for street tree maintenance, resulting in the creation of StreetTreeSF — the Public Works Bureau of Urban Forestry program to professionally maintain and care for San Francisco's 124,000-plus street trees. This document summarizes StreetTreeSF's activities and accomplishments in its second year of operation, from July 2018 to June 2019.

Background

Since July 1, 2017, San Francisco Public Works has been conducting street tree maintenance activities and tree-related sidewalk repair throughout the City. Both tree and sidewalk maintenance are carried out using an efficient and cost-effective system. This system organizes the City into manageable blocks, called "keymaps," and each block is routinely inspected, pruned and receives sidewalk repairs.



Approved by voters in 2016, Proposition E gave way to StreetTreesSF, the Public Works program to care and maintain the City's street trees and treerelated sidewalks.

In preparation for the implementation of StreetTreeSF, the Bureau of Urban Forestry completed a comprehensive point-in-time census of each street tree in San Francisco. The census provided the location and species of every street tree, as well as the condition, based on assessments made by professional arborists certified by the International Society of Arboriculture, or ISA. The point-in-time census baseline information was used to develop a pruning schedule, giving preference to the trees most in need of immediate maintenance: the "worst first." These are trees that pose a safety risk in heavily traveled public rights of way due to such factors as disease or poor limb and/or root structure. A similar point-in-time census was conducted of all tree-related sidewalks across the City. The high-priority areas of focus were then further filtered by identifying tree-related sidewalk tripping hazards near senior centers, schools and bus stops and other areas heavily traveled by vulnerable populations.

Keymaps with the largest number of "worst first" trees and sidewalks were prioritized to receive maintenance first. The keymaps with the highest amount of high-priority maintenance needs were put first in the pruning schedule to address immediate safety issues. Keymaps with less high-priority maintenance needs would be addressed later in the schedule.

Since the condition of a tree can change between the time it was assessed during the census and when it is scheduled for pruning, each tree is evaluated again by a Bureau of Urban Forestry ISA-certified arborist prior to any work being done. Once a keymap is identified as upcoming on the maintenance schedule, an Urban Forestry inspector walks the entire keymap to assess each street tree and make maintenance recommendations.

While StreetTreeSF's crews and contractors prune trees and repair sidewalks throughout the City with a focus on the "worst first," all street trees and tree-related sidewalk damage citywide will be addressed on this scheduling system within a couple of years.

In FY 2018/19, the Bureau of Urban Forestry hired more staff to support and operate the program, purchased more equipment and vehicles for staff to conduct maintenance work, and continued to issue contracts with private-sector tree care contractors to address the increased workload. Crews also concentrated efforts on emergency work, such as fallen limbs, pedestrian and visibility obstructions and trees damaged during storms. Details on the program's FY 2018/19 activities and accomplishments are highlighted below and in the following pages.

Highlights from the Past Year

- Implemented plan and schedule to address "worst first" street tree and sidewalk maintenance needs
- Pruned 11,615 street trees¹
- Removed 2,807 unhealthy and structurally unsound trees
- Completed 21,064 street tree inspection requests
- Repaired 177,106 square feet of tree-related sidewalk damage
- Purchased \$2.7 million in new and replacement vehicles and equipment
- Hired 25 new Bureau of Urban Forestry staff
- Invested 1,393 hours in staff training and professional development
- Completed development of new Public Works Arborist Operations Yard; moved in staff and equipment
- Continued implementation of StreetTreeSF outreach and communication strategy
- Facilitated tree maintenance work at Philip and Sala Burton Academic High School





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Originally reported prune total: 13,757

Street Tree & Sidewalk Maintenance

StreetTreeSF drastically increased the scope of Public Works' tree maintenance responsibilities. Prior to July 1, 2017, the Bureau of Urban Forestry was responsible for maintaining approximately 30,000 street trees, with private property owners and other government agencies responsible for the rest. The bureau is now responsible for the maintenance of all street trees throughout the City, many of which have been neglected or received inconsistent maintenance over the years. During StreetTreeSF's initial startup phase (2017-2021), the bureau is prioritizing the most urgent tree maintenance needs. Once baseline conditions have been improved, routine maintenance activities will begin, including annual inspections of all street trees and pruning on a three- to five-year cycle, depending on the species of the tree.



Prior to StreetTreeSF, Public Works was responsible for maintaining 30,000 street trees and private property owners maintained 85,000 street trees.

Street Trees: The "Worst First"

In FY 2018/19, StreetTreeSF continued to address the City's most problematic street trees or "worst first." These are trees that warrant priority pruning due to safety concerns, structural flaws or lack of clearance for overhead wires, traffic signs and signals, buildings and traffic flow. Areas of the City with a high density of priority tree removals and pruning needs are the focus of StreetTreeSF's initial years. To ensure resources are used most efficiently, all trees along blocks within these priority areas are pruned as part of StreetTreeSF's "block pruning" approach.

Block pruning is the practice of pruning all trees on a City block instead of only a single tree as part of an emergency or service request. This approach leverages economies of scale and reduces per-tree maintenance costs by

Number of trees pruned

16,000

8,000

4,000

2015-16

2016-17

2017-18

2018-19

Fiscal Year

The number of street trees pruned in keymaps in FY 2018/19 decreased slightly from the previous FY, but the total number of trees pruned since the start of the program rose to more than 24,000 trees.

utilizing labor, vehicles, equipment and traffic control for a larger volume of trees.

In its second year, StreetTreeSF pruned 11,615 street trees. ² Of these, 7,894 trees were pruned by contractors and 3,721 trees by inhouse crews. ³ The bureau's crews and contractors also removed 2,807 dead, dying or hazardous trees.

Urban Forestry is pruning more trees than it has in decades. The increase in pruning and maintenance has brought to the forefront the following challenges:

Deferred maintenance. The greatest challenge we face as we bring the City's 125,000 trees to a baseline level of maintenance is deferred

² Originally reported prune total: 13,757

³ Originally reported contractor and in-house breakdown: 7,455 and 6,302



An example of maintenance that was deferred for years.

maintenance. For many years, in some cases up to 10 to 12 years, trees did not receive care. This inadequate level of care is now resulting in a higher demand on our resources due to the need to prune and, in some cases, remove unhealthy or dead trees, or trees posing hazards if pruning cannot mitigate the structural hazard.

The need to catch up on deferred maintenance requires the public's patience. We will get to a baseline maintenance schedule where routine pruning is standard. But we still have more work to do before we get there.

Perception of dramatic pruning. Proper street tree pruning can sometimes look dramatic, especially if the tree has never been pruned for structure or clearance, or after years of deferred maintenance. A freshly pruned tree sometimes shocks residents, but the tree will fill in quickly over time and the fresh cuts will become less noticeable. Structural and clearance pruning is much healthier for the tree, and safer for drivers to ensure we have clearance for safety in the public right of way.

Various pruning needs. Some species of trees require less frequent maintenance, and some require more frequent maintenance. Future pruning schedules will be adjusted based on these needs.

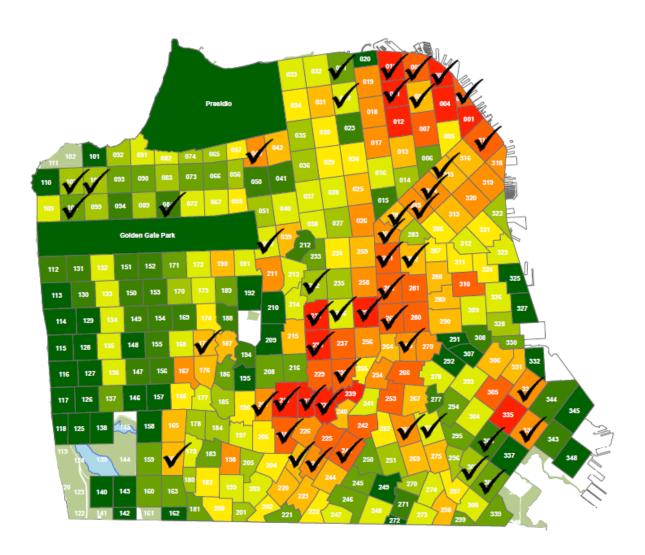
Need to replace removed trees. The rate at which StreetTreeSF is currently operating includes tree removals citywide and this rate exceeds anything we have seen in San Francisco's tree maintenance and removal history. Since StreetTreeSF has been focused on the "worst first" to keep public safety the top priority, many of these removals have been taking place in the initial years of the program. We did not know the full scale of the necessary removals before the start of StreetTreeSF. The number of removals remains less than 4 percent of the total tree population.

Unfortunately, if a lot of trees in one area require removal, the impact that those removals has on neighborhoods can seem severe and cause community concern. StreetTreeSF strategically focuses on funding maintenance operations. The dedicated funds, under the voter-approved StreetTreeSF program, do not cover tree planting or replacement. The removal of dead, diseased and dangerous trees during the early years of StreetTreeSF has led to ongoing discussions on how best to secure funding to replenish and grow San Francisco's urban forest.



"Dramatic" look after completed maintenance.

Priority Street Tree Pruning Areas (Keymaps)



San Francisco Public Works' grid system divides the City into smaller geographic units, or keymaps, to help plan and coordinate maintenance activities. Keymaps containing higher concentrations of trees with priority pruning needs — "worst first" — are being prioritized for maintenance. Crews also are pruning all street trees on blocks within these priority keymaps as part of StreetTreeSF's block pruning approach. Areas with checkmarks were completed during StreetTreeSF's first and second years.

Sidewalk Repair

As part of StreetTreeSF, Public Works is responsible for the repair of all street tree-related sidewalk damage. In FY 2018/19, Public Works cement crews and sidewalk contractors removed and replaced 177,106 square feet of damaged sidewalk.

StreetTreeSF is targeting repairs in areas with vulnerable populations and a high volume of pedestrians, such as near hospitals, senior centers, schools, transit stops and neighborhood commercial corridors, as well as in Vision Zero high-injury corridors.

Depending on the scale of damage, some tree-related sidewalk damage can be repaired by concrete slicing.



Concrete slicing is a fast, cost effective and environmentally friendly repair method that does not require removal and replacement of sidewalk squares.





Sidewalk after being treated by concrete slicing.

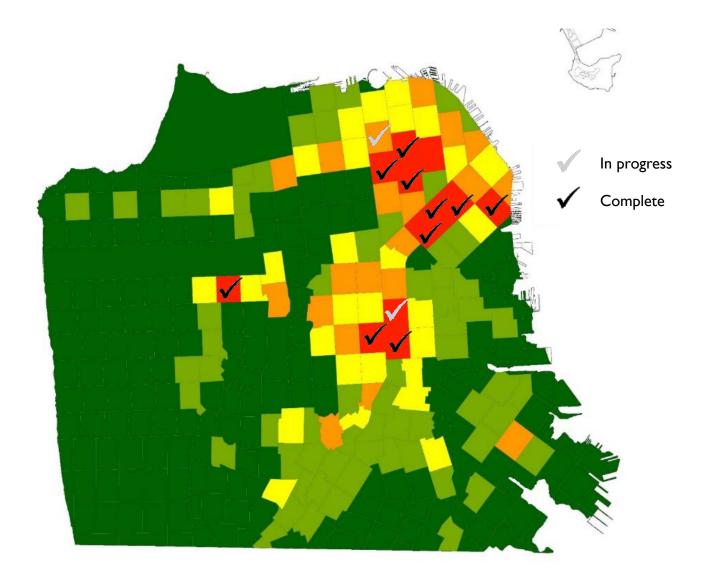
Concrete slicing utilizes specialized equipment to shave down a raised or buckled sidewalk to remove tree-related tripping hazards. This is a fast, cost-effective and environmentally friendly approach to performing smaller sidewalk repairs (2 inches or less of concrete uplift).

Where damage is more severe, removal and replacement of an existing sidewalk is required. Tree basin expansions also require concrete to be cut away to make room for expanding tree roots or expanding trunks.

Basin Backfills

Street tree basins that need to be filled with soil, wood chips or decomposed granite are backfilled as a part of StreetTreeSF. In FY 2018/19, Public Works landscape crews backfilled 1,779 street tree basins.

Tree-related Sidewalk Damage Areas (Keymaps)



StreetTreeSF prioritizes repair of street tree-related sidewalk damage in areas located near neighborhood commercial corridors, schools, hospitals, senior centers and the Vision Zero high-injury network, also known as "hot spots," as reflected on the map in red. Repairs in most "hot spot" areas have either been completed or are in progress in order to keep pedestrians safe while travelling in high-traffic public rights of way.

Staffing and Training

Staffing Plan & Hiring

To meet the increased workload and demands of StreetTreeSF, the Bureau of Urban Forestry has projected a total staffing need of 55 new employees over the next three to four years (see table). In FY 2018/19, the Bureau filled 25 of these positions including arborists, urban forestry inspectors and assistant superintendent, but continues to encounter challenges finding qualified Arborist Technician applicants due to a limited pool of candidates. In FY 2019/20, the bureau will continue working to fill vacant positions with a focus on arborists, urban forestry inspectors and a database manager.

StreetTreeSF Staffing Plan (2017-2021)

			Additional Positions Funded By StreetTreeSF		
Job Title	Class Number	Existing BUF Positions	HIRED	VACANT	Total
Arborist Tech	3434	13	6	8	27
Arborist Supervisor I	3436	3	1	2	6
General Laborer	7514	0	6	8	14
Principal Administrative Analyst	1824	0	1	0	1
Public Information Officer	1312	0	1	0	1
Urban Forestry Inspector	3435	5	1	1	7
Senior Clerk	1406	1	1	0	2
Cement Finisher Supervisor I	7227	0	1	0	1
Cement Mason	7311	0	4	0	4
Operating Engineer	7328	0	1	0	1
Truck Driver	7355	3	1	0	4
Manager IV	0932	0	1	0	1
Principal Business Analyst	1054	0	0	1	1
Management Assistant	1842	0	0	1	1
Apprentice Arborist Tech	3408	2	0	9	11
Clerk	1404	0	0	1	1
	TOTALS	27	25	31	83

Training & Staff Development

In FY 2018/19, the bureau invested 1,393 hours in staff training to ensure safe operations and delivery of high-quality service. All staff are required to complete at least 10 hours of professional development training annually. Trainings completed by bureau staff include:

- Line Clearance Arborist Certification (Arborists)
- Cone Delineation / Traffic Control Techniques (Arborists, Cement Masons, Laborers)
- Defensive Driving (All)

- Safety / Code of Safe Practice (All)
- Stump Grinding (Arborists)
- City Pruning Standards (Arborists)

Equipment, Vehicles & Facilities

To accommodate the increased workload and staffing, the Bureau of Urban Forestry is utilizing StreetTreeSF's funding to purchase equipment and vehicles, as well as to develop a new facility for arborists.

Equipment & Vehicles

In FY 2018/19, the bureau purchased 23 new and replacement vehicles and other equipment, valued at approximately \$2.7 million. The equipment purchased included an expanded vehicle fleet (aerial lift bucket trucks, water truck, mini-dump and utility trucks) and equipment inventory (chippers, stump grinders, backhoe loader and compressor).

Current Inventory and New Equipment & Vehicle Purchases (2017-2021)

		Additional Equip		
Item	Current	FY 17/18 Purchased Equipment	FY 18/19 Purchased Equipment	Total
Aerial Lift Bucket Truck	6	2	5	13
Rental Bucket Truck	2	0	0	2
Knuckle Boom	1	0	0	1
Chipper	4	3	1	8
Chipper Truck	5	2	0	7
Stump Grinder	2	8	0	10
Backhoe Loader	0	1	1	2
Water Truck	0	2	1	3
Compressor	1	1	0	2
Utility Trucks	10	6	9	25
10-wheel Dump Truck	0	0	1	1
Mini Dump Truck	1	2	3	6
Packer	1	0	0	1
Air Compressor	0	0	1	1
Mini Excavator	0	0	1	1
TOTALS	33	27	23	83

Facilities: Arborist Operations Yard

A major accomplishment in FY 2018/19 was the completed development of a new facility for the Bureau of Urban Forestry. The Arborist Operations Yard located at 1920 Evans Avenue underwent various site improvements, including installation of perimeter fencing, office trailers and sewer/power connections. Arborists moved from the current Public Works Yard at 2323 Cesar Chavez Street to the new 28,000-square-foot facility in the summer of 2019.

Key elements of the facility include:

- Office trailers
- Utility infrastructure (water, sewer, electricity, fiber optics)
- Parking and maneuverability for 48 vehicles
- Storage containers for tools and equipment
- Security (gates, fencing, lighting)
- Phone/computer network
- Bathrooms and showers
- Staff lockers



Public Works moved arborists to a new Arborist Operations Yard at 1920 Evans Avenue. The new yard helps house StreetTreeSF's growing staff and fleet of vehicles.









Urban Forest Inspection

In FY 2018/19, Bureau Urban Forestry Inspectors completed 21,064 internal and public inspection requests. Internal inspections include the inspection of keymap areas prior to maintenance, a key component of StreetTreeSF program that necessitates a substantial amount of time and effort. Additional inspections are conducted after a keymap has been completed (and sometimes during) to check the quality and consistency of the maintenance work being provided. Public inspection activities performed by urban forestry inspectors include responding to public service requests, assessing tree and sidewalk conditions outside scheduled maintenance and reviewing development and tree removal permits.

Communications & Outreach

Public information and outreach are essential to the success of StreetTreeSF. Continuing to create awareness of the program, its priorities and pruning schedule remained a focus of second-year outreach activities. Accomplishments in FY 2018/19 include:

- Updated and improved door hanger with QR code that sends user directly to sfpublicworks.org/streettreesf, and information and image of pruning expectations
- Developed and launched online notification platform (webpage) for the public to view details associated with tree removals citywide
- Finalized opt-out agreement, internal implementation and tracking procedures, and multilingual collateral for public outreach (brochure, flyer)
- Conducted meetings with nearly 20 neighborhood and community groups to review the program and answer questions specific to neighborhood concerns
- Developed three SF Public Works TV episodes about StreetTreeSF and some of the biggest maintenance efforts taking place citywide
- Increased presence on Twitter to highlight maintenance work taking place
- Tabled at monthly Community Clean Team events (one in each of the 11 supervisors' districts) with multilingual outreach materials (brochures, flyers, information boards), activities and giveaways to educate and inform the public of tree maintenance activities
- Updated 311 mobile and web apps to correct how tree-related service requests are routed (tree-related sidewalk uplift to Urban Forestry vs. the Bureau of Street-use and Mapping)
- Presented to the Board of Supervisors and Urban Forestry Council on StreetTreeSF's goals and progress
- Briefed tree crew staff on information and resources to share with the public when approached in the field
- Continued distribution of door hangers in keymap area prior to crews starting maintenance activities
- Continued updates to the Bureau of Urban Forestry's website, including program FAQs, interactive StreetTreeSF pruning schedule map, videos of work, opt out information, etc.
- Continued use of road signs and No Parking signs on job sites with information about StreetTreeSF
- Continued Street Tree Care class and "Don't Prune" campaign to educate citation recipients of proper tree care and the role of StreetTreeSF

StreetTreeSF Public Information

StreetTreeSF Brochure



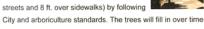
The StreetTreeSF brochure provides general information to the public, including answers to frequently asked questions and a link to the citywide pruning map and schedule. It is available in English, Spanish and Chinese.

Updated Door Hangers



Please note, some pruning may appear dramatic.

A lopsided and/or uneven canopy may be necessary to gain clearances from streets, sidewalks and buildings. Our arborists balance the health of each tree with required minimum clearances (14 ft. over streets and 8 ft. over sidewalks) by followin



Door hangers are distributed in keymap areas prior to receiving service from StreetTreeSF. The updated hangers have information about pruning techniques.

Road Signs and No Parking Signs





Informational road signs are used at job sites where tree maintenance is taking place. Prior to and during tree maintenance work, "No Parking" signs are posted with the StreetTreeSF website URL.

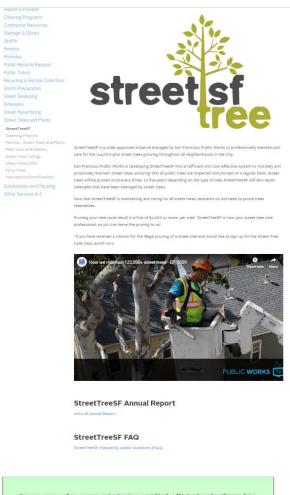
QR Codes

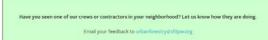




A QR code was added to No Parking signs and door hangers for members of the public to easily scan and be taken directly to the program webpage.

StreetTreeSF Webpage





If you feet that a street tree near you is posing an immediate safety concern in a public right-of-way, report the issue to 31 conline, via the mobile SF 31 rapp or call 31s. Before you contact us, determine the street address and the nearest cross-street where the street tree is located.

Note: Urgent pruning requests must meet an immediate safety concern requirement in order to be addressed Conditions requiring immediate attention include:

- · Broken, hanging limbs
- Damaged and/or dead limbs
- Blocked streets, sidewalk or bike lanes (clearance issues)
- Interference with traffic signs or signals

The StreetTreeSF webpage provides information about the program, an overview video, annual reports, FAQs and the interactive pruning schedule map. The webpage can be accessed through the Public Works website, https://www.sfpublicworks.org/streettreesf or by typing in streettreesf.org or streettreesf.com. There, information can be found on how to legally opt out of the program and what criteria qualifies as an SF 311 service request. There also is an online option to provide feedback regarding the maintenance work happening throughout the City.

StreetTreeSF Pruning Schedule Map

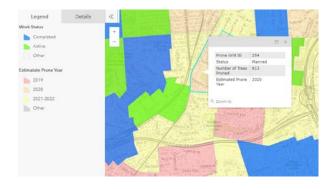
The below StreetTreeSF pruning map is a guide to when and where current work is happening and what work is planned over the next several years. Enter your full address to find out when trees in your neighborhood will receive a visit from a StreetTreeSF crew.

We ask for your patience as we work diligently to attend to the City's 125,000 street trees.



Schedules are estimates and planned work is subject to change for numerous reasons. Please check back periodically as we continue to update information based on the latest data collected in the field

The pruning map schedule does not replace the existing notification processes for street tree removals. Signs posted and/or a letter will inform you of upcoming street tree removals. You may also view posted removals on the Tree Removal Notification Page.



Property owners can find estimated pruning dates for street trees in their area or neighborhood by entering an address directly on the pruning map at streettreesf.org. The map also will tell you if an area has been pruned or is actively being pruned. The site is frequently updated to reflect the latest information about where StreetTreeSF is throughout the City.

Trees at Schools (San Francisco Unified School District)

StreetTreeSF's annual funding includes up to \$500,000 for tree maintenance on SFUSD properties. The Bureau of Urban Forestry works with SFUSD to program these funds to address the school district's tree-related priorities. In FY 2018/19, funding supported contracted maintenance work at Phillip and Sala Burton Academic High School, including the pruning of 15 trees, removal of seven unsafe trees, stump grinding and tree pest treatment.



StreetTreeSF's funding includes up to \$500,000 per year for tree maintenance at SFUSD schools. In FY18/19, tree pruning and removal work was performed at Phillip and Sala Burton Academic High School (400 Mansell St).

Financial Summary

In FY 2018/19, StreetTreeSF's annual budget totaled \$19.7 million. The full amount was programmed and encumbered with the largest amounts being dedicated to Bureau of Urban Forestry staff and tree maintenance contractors. Actual expenditures within the fiscal year amounted to \$19.4 million as shown in the accompanying table. This reflects \$300,000 in contracts and vehicles/equipment purchases that were processed but expended outside of the fiscal year.

FY 2018/19 Budget & Expenditures

Expense	Amount Budgeted	Actuals
Staff	\$7,900,000	\$10,600,000*
Contractors	\$9,100,000	\$8,000,000
Equipment & Vehicles	\$2,700,000	\$800,000
Total	\$19,700,000	\$19,400,000

^{*}Staff actuals reflect a combination of hiring, ramped up operations, cost-of-living wage increase, and overhead rate increase.