

# 2019

# ANNUAL URBAN FOREST REPORT

FISCAL YEAR JULY 2018 – JUNE 2019



**SAN FRANCISCO URBAN FORESTRY COUNCIL**

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***Submitted to Mayor London N. Breed and the Board of Supervisors by the Department of the Environment, pursuant to San Francisco Environment Code Chapter 12, Section 1209.***

The **Urban Forestry Council** advises City Departments, the Board of Supervisors, and the Mayor. It is charged with developing a comprehensive urban forest plan; educating the public; developing tree-care standards; identifying funding needs, staffing needs, and opportunities for urban forest programs; securing adequate resources for urban forest programs; facilitating coordination of tree-management responsibilities among agencies; and reporting on the state of the urban forest.

[Placeholder for new Picture]

### **Urban Forestry Council members from left to right**

Matthew Stephens, Garden Director, San Francisco Botanical Garden and Conservatory of Flowers, San Francisco Recreation and Park Department

Tom Carter, Deputy Director, Maintenance, Port of San Francisco

Damon Spigelman, Public Utilities Commission

Nicholas Crawford, Public Works

Dan Flanagan, Executive Director of Friends, the Urban Forest – CHAIR

Carla Short, Superintendent of Urban Forestry, San Francisco Public Works

Phillip Pierce, Community Representative

Michael Sullivan, Partner, Orrick, Herrington & Sutcliffe

Jon Swae, Urban Forest Plan Manager, San Francisco Public Works

Blake Troxel, Presidio Trust

Malcolm Hillan, Environmental Horticulture Professor, City College of San Francisco

Igor Lacan, Urban Forestry Advisor, UC Cooperative Extension

Andrew Sullivan, Landscape Architect

### **Urban Forestry Council Staff**

Peter Brastow, Healthy Ecosystems, Biodiversity and Urban Forestry Council Coordinator, San Francisco Environment

Anthony Valdez, Commission Affairs Manager, San Francisco Environment

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## Executive Summary

In its sixteenth year, the 2019 Annual Urban Forest Report provides an analysis of survey data from public, private, and nonprofit agencies that plant and/or maintain the urban forest within the City and County of San Francisco in Fiscal Year 2018-2019 (FY18-19). When possible, the analysis compares FY18-19 data with the previous four years of data, starting in FY14-15. Trends are identified through comparisons across all five years. Likert scale data were collected to identify trends in agency-perceived concerns with urban forestry in San Francisco as well as perceived limitations that affect their work and the overall urban forest. Agency-provided data from the 2019 survey is provided in Tables 1-3 at the end of the report.

Findings demonstrate that some tree activities in San Francisco have increased in FY18-19. Most significant is the increase in trees maintained. The number of trees planted decreased slightly from previous years. Whereas the number of trees removed increased substantially due to implementing deferred maintenance across the street tree network following Proposition E, or *StreetTreeSF*. Dead, dying, diseased, and potentially hazardous street trees had not begun to be addressed until these past two years because of lack of funding. San Francisco Public Works is now able to maintain all street trees. The increase in tree removals is expected to continue to be high in subsequent years as Public Works continues to address tree removal work.

Tree planting activities currently struggle to keep up with tree removals for a variety of reasons, primarily funding. *StreetTreeSF* provides funding for street tree maintenance but does not fund tree planting. Public Works did identify some additional funding in 2019 for planting, but they remain concerned about sustaining planting funding long-term. Friends of the Urban Forest continues to seek grant funding for tree planting.



**California Buckeye, a San Francisco Landmark Tree**, photo by Peter Brastow

# Annual Survey Methods

San Francisco Environment surveyed 21 City departments, other public agencies and universities, non-government organizations and PG&E, which oversee or manage a portion of the urban forest in San Francisco. Survey questions were the similar to those used in previous years (see attachments). Agencies were asked to provide information on budgets and staffing, maintenance activities, accomplishments, and concerns in FY18-19. Sixteen agencies provided full or partial responses.

## This data is tracked to:

1. Better understand the resources used to maintain the urban forest across the city.
2. Track agency priorities, needs, and concerns, and monitor how they change over time.
3. Better understand threats to the future well-being of our urban forest.
4. Find ways to increase the contributions that trees provide to our community.
5. Which tree species are planted and why.

## List of Participating Organizations

- California Department of Transportation, District 4 (Caltrans)
- City College of San Francisco (CCSF)
- Friends of the Urban Forest (FUF)
- Laguna Honda Hospital (LHH)
- Office of Community Investment and Infrastructure (OCII)
- Port of San Francisco (Port)
- Presidio Trust (Trust)
- Recreation and Park Department (RPD)
- San Francisco Housing Authority (SFHA)
- San Francisco International Airport (SFO)
- San Francisco Municipal Transportation Agency (SFMTA)
- San Francisco Planning Department (Planning)
- San Francisco Public Utilities Commission (SFPUC)
- San Francisco Public Works, Bureau of Urban Forestry (SFPW)
- San Francisco State University (SFSU)
- San Francisco Unified School District (SFUSD)
- Treasure Island Development Authority (TIDA)
- University of California, San Francisco (UCSF)

The following organizations and departments either did not respond or stated that they were unable to provide data for this year's report:

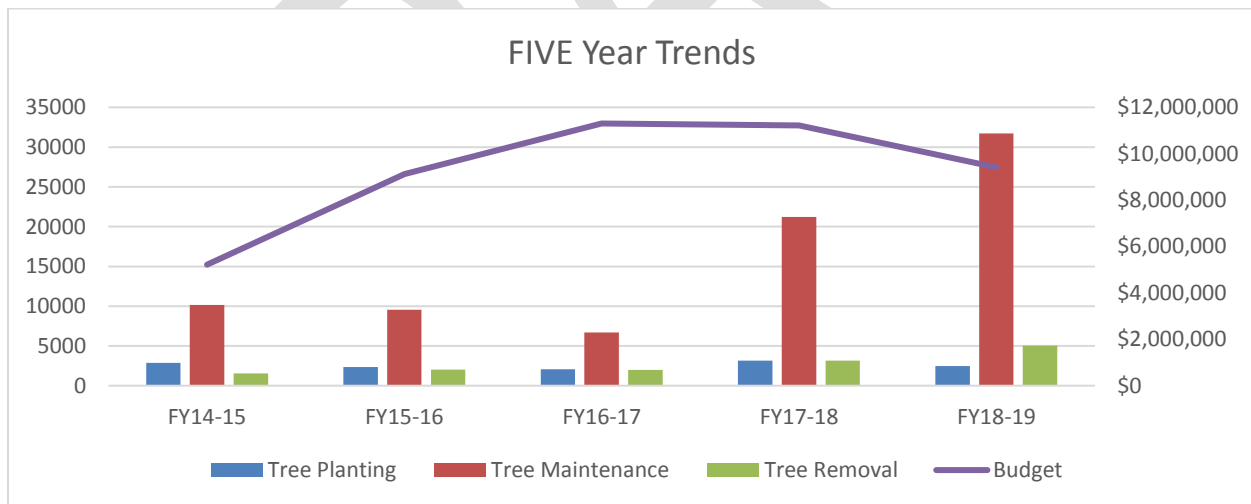
- Golden Gate National Recreation Area (GGNRA)
- Pacific Gas and Electric (PG&E)
- San Francisco General Hospital (SFGH)

# Primary Findings

The data provided by participating agencies for this report is compared to data provided since FY14-15. While participation is required by Chapter 12, Section 1209 of the San Francisco Environmental Code, not all agencies participate in the survey each year. Trends identified in this section only include data from agencies that have reported in each of the last five years, of which there are ten:

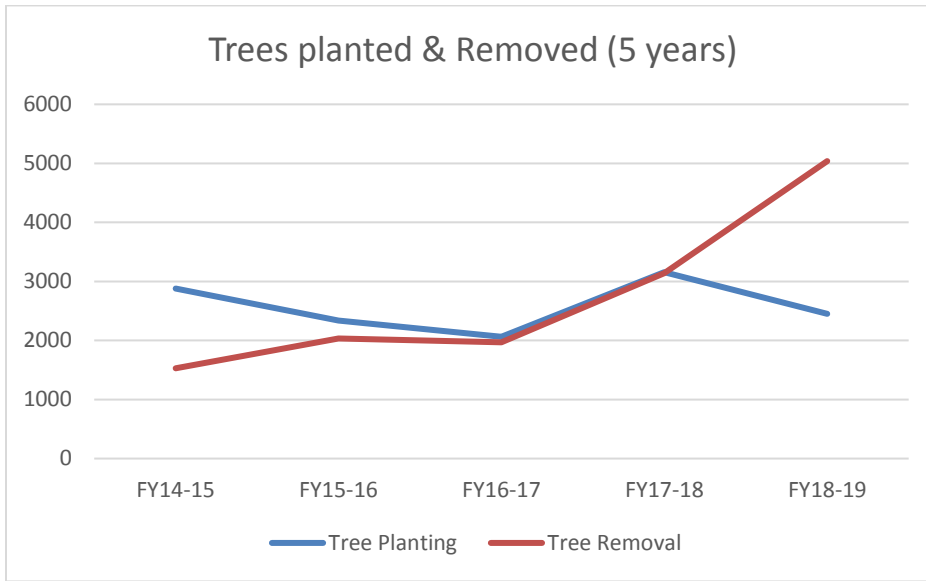
- Friends of the Urban Forest (FUF)
- Port of San Francisco (Port)
- Recreation and Park Department (RPD)
- San Francisco International Airport (SFO)
- San Francisco Municipal Transportation Agency (SFMTA)
- San Francisco Public Utilities Commission (SFPUC)
- San Francisco Public Works, Bureau of Urban Forestry (SFPW)
- San Francisco State University (SFSU)
- San Francisco Unified School District (SFUSD)
- Treasure Island Development Authority (TIDA)
- University of California, San Francisco (UCSF)

**Figure 1. Trees & Funding:** Reported tree planting and urban forestry budgets since FY14-15 (ten agencies)



The big story with tree management numbers remains the increase in tree maintenance, explained in large part by Public Works and the second year of implementation of *StreetTreeSF*, following the passage of Prop E. Both UCSF and the Port also showed significant increases in trees maintained. Tree budgets trended downward from FY 17-18 to FY 18-19, since over half of agencies among the ten reflected in Figure 1 experienced urban forestry budget decreases, reflecting apparent belt-tightening for several organizations.

**Figure 2: Tree Planting & Removal Trends Since FY14-15**



Trees removed increased in FY 18-19, again, due to implementation of *StreetTreeSF*, and the deferred maintenance needed for hazardous, diseased and dying trees throughout the city. *StreetTreeSF* does not fund planting, and those numbers trended down from FY 17-18. However, Public Works has found funding for planting for fiscal year FY 19-20, and FUF continues to pursue funding of course, so hopefully we'll see an increase in street trees planted over the next year.



**"Hippy Hill" in Golden Gate Park**, photo by Peter Brastow

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## Current Street Tree Estimate

*EverTreeSF\**, a complete street tree inventory, was conducted between 2013-2017 and identified 124,795 street and median trees throughout San Francisco.

Using the reported data on street tree planting and removal by San Francisco Public Works and Friends of the Urban Forest for this report, the current total number of street trees as of June 30, 2018 is estimated at 124,796. In FY17-18, 3,157 new street trees were planted and 3,156 were removed.

Maintaining stasis does not meet the goals of the *San Francisco Urban Forest Plan: Phase I*, which recommends the addition of 50,000 trees by 2034. Tree planting activities will need to increase.

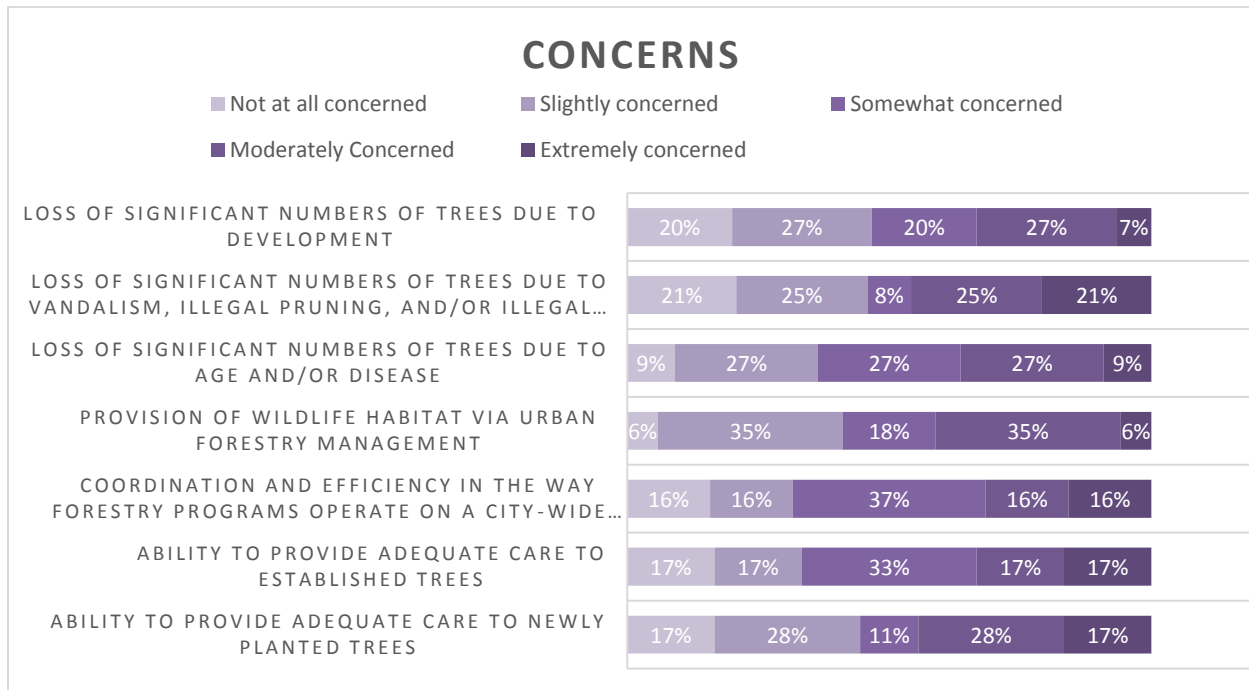
\*Inventories show a snapshot in time of the urban forest at the time the inventory was taken.



## Common Concerns & Limitations

Respondents were asked to score the significance of common concerns and limitations for their agencies and organizations. The following figures display the percentage of each level of significance for all responses in 2019.

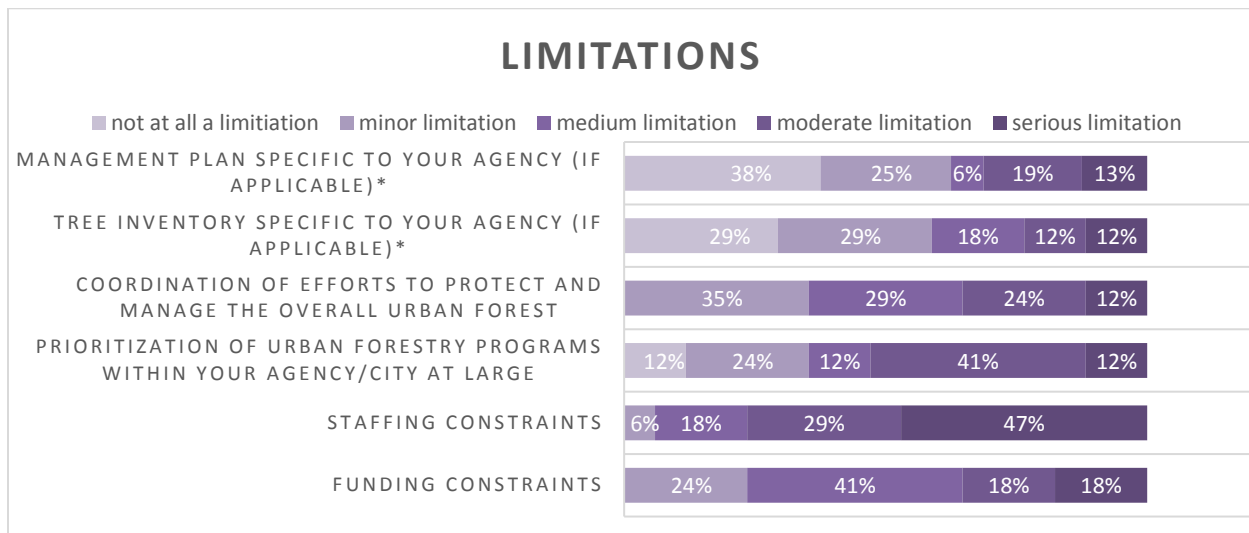
**Figure 3. Concerns:** Responses to common concerns



In 2018, urban foresters expressed relatively less concern about loss of trees due to development or vandalism etc. In 2019, the data are more even in terms of degrees of concern for these issues, including for trees dying due to disease, but there is clearly still significant levels of concern for tree loss due to these various causes.

New for the Concerns poll this year is a question about wildlife habitat. 41% of respondents expressed either moderate or extreme concern for this, with the same percentage expressing slightly or no concern. This would indicate that there is significant interest in this particular value that the urban forest has the potential to provide, but it is not shared by all respondents.

**Figure 4. Limitations:** Responses to common limitations



Over 75% of agencies reported staffing constraints as a serious or moderate limitation in FY18-19. Funding constraints were reported by 76% of respondents of at least a medium concern. These numbers translate over to the question of prioritization within organizations and agencies, wherein respondents expressed at least medium concern for urban forestry prioritization 2/3 of the time.

Compared to last year, having a management plan was considered significantly less of a limitation in 2019, whereas needing a tree inventory trended slightly upward.

### General Liability Claims

This is the third year that questions about tree-related general liability claims were included in the survey. The goal is to identify other costs City departments and other forest-managing agencies incur in their tree managing activities, and to track how tree care and maintenance may factor into the number and costs of these claims. Compared to last year, many fewer claims were reported for fiscal year 2018/2019. In fact, only three agencies reported claims, and only two ended up paying out. One agency paid out just one claim, but for \$170,000, while the other paid out 5 at an average of \$7044.

## Reported Major Opportunities and Challenges

Management of San Francisco's urban forest is divided among many stakeholder agencies that provide direct care to trees within their jurisdiction, as well as agencies that engage with partners to support forestry activities on city-owned land. The following provides general background about each agency and specific information they reported in their FY18-19 survey responses. For this section, we draw upon the answers to the questions in the survey that inquiry about climate and biodiversity as well as regarding changes and accomplishments within the organization, and any greatest concerns.

**Friends of the Urban Forest (FUF)** helps individuals and neighborhood groups plant and care for street trees and sidewalk gardens in San Francisco.

"San Francisco's climate is expected to look a lot more like Los Angeles in approximately 100 years - so we keep a close eye on the species we are planting and how those trees are responding to prolonged drought, rising temperatures, and introduced pests & pathogens. We also place a high value on tree species diversity for several reasons including wildlife habitat, hedging against future extreme weather conditions, and as a strategy for resilience against known invasive pests such as Invasive Shot Hole Borers (ISHB)."

FUF are starting to consider helping residents procure native San Francisco trees for planting in backyards or other spaces besides the street tree wells, in order to contribute more to creating a biodiverse city.

FUF continues their key partnership with Public Works, Bureau of Urban Forestry, so that together they can provide optimal service to San Franciscans. FUF remains concerned about their ability to source quality planting stock of desirable species and their ability to water newly planted trees. They are always concerned about invasive pests & pathogens, drought, heat waves and extreme weather events.

The **California Department of Transportation District 4** (Caltrans) manages trees and green spaces on state rights-of-way in the Bay Area and works with the Adopt-A-Highway division to allow neighborhood groups access to land for community gardening. Caltrans has identified tree canopy as a key component in their efforts to mitigate greenhouse gas emissions, and they are starting to calculate and monitor tree canopy as a component of environmental stewardship. They have funded three contracts to remove trees affected by drought throughout the district (9 Bay Area counties) totaling about \$15M. They remain concerned about drought effects and fire hazards.

**Laguna Honda Hospital (LHH)**, a San Francisco Department of Public Health facility, is a 62-acre campus with approximately 3,000 trees, 80 percent of which are within open space areas. Laguna Honda is concerned about tree and limb failures for public safety as well as Algerian Ivy smothering trees. Laguna Honda has partnered with local grassroots groups, including SF Urban Riders, to construct and make available for public enjoyment 2.5 miles of new trails throughout the property. These trails not only will provide local residents and other San Franciscans the opportunity for respite from the urban grind, but also for the possibility of increased management

and stewardship for local flora and fauna, thus giving people the opportunity to connect to nature in the heart of the city.

The **Office of Community Investment and Infrastructure** (OCII) is the local successor agency to the San Francisco Redevelopment Agency. OCII continues to be affected by funding constraints due to the state-wide dissolution of Redevelopment Agencies that took effect in February 2012.

**Pacific Gas and Electric Company** (PG&E) works with property owners to resolve conflicts between trees and power lines. In 2018, PG&E used LiDAR to identify trees that may need maintenance, and only used that data to determine where inspectors needed to go. This was a pilot to see if remote sensing technology could be used to improve the efficiency and accuracy of utility line clearance inspection in an urban environment. PG&E is concerned that residents receive appropriate messaging about which agency is responsible for the maintenance of street trees with limbs that are within ten feet of power lines, as well as coordinating such tree maintenance with San Francisco Public Works. *This information is from the 2018 survey.*

The **Port of San Francisco** (Port) manages the trees along the San Francisco Bay waterfront. The Port selects drought tolerant trees that require minimum water in consideration of climate and climate change. As the opportunity arises, the Port is mindful of selecting trees that provide habitat, nectar, and fruit for native insects and foragers. The Port continues to monitor the health of the canary palms on the Embarcadero (*Phoenix canariensis*). The Port reports that SF Public Works, Bureau of Urban Forestry has been caring for the palms and doing a great job. In spite of their efforts, several of the trees have succumbed to the fusarium wilt disease and will be replaced at a significant cost.

The **Presidio Trust** (Trust) oversees approximately 70,000 trees (10,000 of which are actively managed) in the Presidio of San Francisco, the 1,491-acre National Historic Landmark District located within the Golden Gate National Recreation Area. The Trust's historic forest species palette is somewhat restricted; however, the program is moving more towards understory plantings along the overstory trees. This helps to improve both local biodiversity and habitat in the new forest stands.

The **Recreation and Parks Department** (RPD) maintains over 3,400 acres of open space with an estimated 131,000 trees in San Francisco, including large eucalyptus plantations at Mount Davidson, Mount Sutro and Glen Canyon and diverse tree stand across Golden Gate, McLaren and other parks, including the native coast live oak woodlands in Golden Gate Park and Buena Vista Park. RPD is primarily concerned with increasing staffing, equipment, tree mortality and budget.

The **San Francisco Housing Authority** (SFHA) has a maintenance agreement with Public Works to maintain trees around residences on SFHA land. Housing facilities are undergoing redevelopment and being newly managed by third party non-profit and for-profit developers,

depending on the site. SFHA is concerned about drought conditions and old trees (presumably for safety reasons).

The **San Francisco International Airport** (SFO) manages open space, bay shoreline, trees, landscaped areas and endangered species habitat surrounding the airport facilities. SFO is restricted on new plantings by FAA regulations and potential wildlife habitat concerns. As their planted trees mature, they are facing more work clearing roadways and structures. The airport reports challenges finding and hiring qualified staff. They have a lot of new landscape installations, but not sufficient personnel budgeted to carry out the maintenance.

The **San Francisco Municipal Transportation Agency** (SFMTA) remains very concerned about tree and plant health in the ongoing drought conditions. They usually consider what type of rainfall they had for the year when considering tree planting. SFMTA is concerned about staffing.

The **San Francisco Planning Department** (Planning) has developed policies, studies, and plans to support the long-term health of the city's urban forest. Planning led the production of the Urban Forest Master Plan, Phase I Street Trees, the implementation of which is now under the aegis of Public Works, Bureau of Urban Forestry. Planning is currently working on a number of public realm plan projects that should have an effect on the urban forest, including the Civic Center Public Realm Plan.

The **San Francisco Public Utilities Commission** (SFPUC) manages trees and green space around reservoirs. The Natural Resources Division hired a manager to address and follow up on tree-related concerns and activities within San Francisco. Their greatest concern is the age and condition of the trees on lands under their jurisdiction. The City Distribution Division lost their interdepartmental Recreation & Park tree crew due to retirement and management changes. They are concerned with their inability to respond to public safety emergencies now that they have lost this tree crew. *This information is from the 2018 survey.*

**San Francisco Public Works, Bureau of Urban Forestry** (SFPW) provides oversight and care to trees within the City's public rights-of way, including planting and maintaining street trees, issuing street tree planting and removal permits to residents, and responding to emergency street tree issues. Public Works is considering climate change by identifying and planting species that are robust urban candidates and able to withstand hotter, drier conditions and longer drought durations. They are also considering biodiversity and wildlife habitat, albeit as a secondary consideration for street trees with survivability and suitability as a street tree being the primary lens. In open spaces, native species play a key role in their planting palette. Continued implementation of StreetTreeSF (into its third year of implementation) has meant scaling of personnel and equipment. PW arborists are now based at a free-standing facility with offices, parking, and storage. Staffing expanded to include an analyst and clerk plus full staffing of management and inspectors. The pace of StreetTreeSF's tree removal creates a need for tree planting and a corresponding need for funding. Public concern over this gap is valid and is a priority for Public Works. Pruning of street trees at a rate of approximately 20% per year is resolving many outstanding tree-related issues but leaves others scheduled for pruning in 2021 or

2022 waiting. Communicating progress in their work and expressing their strategy in a transparent, responsible way using their recently hired Public Information Officer, is key to the program's success. SFPW remains concerned, but has had some recent success, securing funding for the planting and watering of replacement and newly-planted trees. *StreetTreeSF* funding does not provide for these activities, which are crucial to ongoing urban forest health.

**San Francisco State University** (SFSU) manages an urban forest that provides a network of windbreaks, bird nesting habitat, and sheltered courtyards. Regarding biodiversity, SF State reports that they are a small area, so some biodiversity is preferable, but that is not a high priority. They choose species for their ability to handle drought and for their mature habit. They do prefer to use species native to California when appropriate. They have completely staffed the tree crew; they now have a full three-man crew performing tree maintenance on a full-time basis. They are training new crew and completing installation in a list of areas for new plantings within the new master plan. They are continuing to work on their tree database for accuracy.

The **San Francisco Unified School District** (SFUSD) provides care and maintenance for approximately 3,000 trees on 430 acres of school district property. Lack of funding to replace removed trees continues to be an ongoing concern. SFUSD reports that they consider climate when selecting tree species, but so much climate change, so far. There was a study in 2010 that demonstrated a 33% decrease in fog during the 20<sup>th</sup> century, but the long-term outlook for fog remains uncertain for San Francisco. Genetic diversity of any species planted in the city is going to be important for adaptation to a changing climate. In fiscal year 2018/2109, SFUSD reports that they have been able to plant some trees and water them, with the help of San Francisco Public Works. The school district remains concerned about the lack of funding for replacement trees and a lack of interest in reforestation. The school district might consider looking at State and Federal grants, including from CalFire.

The **Treasure Island Development Authority** (TIDA) oversees the care of all trees on Treasure Island and most trees on Yerba Buena Island (excepting the U.S. Coast Guard property). Tree species for planting on Yerba Buena Island (YBI) are selected consistent with the YBI Habitat Management Plan, which considers trees in the context of the larger natural environment and native plant communities of Yerba Buena Island. Due to further tree removal for the Southgate (eastbound off ramps) Project, TIDA will add several dozen more trees to its existing three hundred native tree Memorandum of Agreement (MOA) with Treasure Island Community Development and San Francisco County Transportation Authority. As the development unfolds on YBI over the next several years, hundreds of coast live oak, California buckeye, toyon, blue elderberry, and of course hundreds of thousands of dozens of other species of local native plants will be installed throughout the island.

The **University of California, San Francisco** (UCSF) owns and manages a 61-acre open space area just south of the Parnassus Heights campus called the Mount Sutro Open Space Reserve. UCSF is committed to maintaining the Reserve as a safe and accessible resource that San Francisco residents and visitors can enjoy. Following its 2018 approval (the culmination of a long struggle to establish a mandate for managing the trees in the reserve), UCSF is in the midst

of implementing the 20-year Vegetation Management Plan for Mount Sutro Open Space Reserve. The management of significant tree loss attributed to drought, pests and diseases, and overcrowding of trees is a large concern for UCSF. They report that they have more dead trees than were accounted for in their plan, i.e., the trees are dying faster than they can remove them. The plan has several goals including to “improve and enhance the stability of the ecosystem.” UCSF plans to implement several pilot ecological management projects to improve native plant and wildlife habitat and test the methods for the health of the reserve.

**San Francisco General Hospital (SFGH)** is a San Francisco Department of Public Health facility that serves as the city’s only trauma hospital and serves over 100,000 patients a year. SFGH added one full-time gardener to its staff in fiscal year 17/18. They are concerned with occurrences of tree vandalism, bark beetles, and an upcoming major construction project that will require the removal of a large number of trees. *This information is from the 2018 survey.*



**Lobos Creek Valley in the Presidio**, photo by Peter Brastow

## Annual Survey Response Data

|   |          |   |       |
|---|----------|---|-------|
| California Department of Transportation             | Caltrans | San Francisco International Airport         | SFO   |
| City College of San Francisco                       | CCSF     | San Francisco Municipal Transport. Agency   | SFMTA |
| Friends of the Urban Forest                         | FUF      | San Francisco Public Works                  | SFPW  |
| Laguna Honda Hospital (Department of Public Health) | LHH      | San Francisco Recreation & Parks Department | RPD   |
| Office of Community Investment and Infrastructure   | OCII     | San Francisco State University              | SFO   |
| Port of San Francisco                               | PORT     | San Francisco Unified School District       | SFUSD |
| Presidio Trust                                      | Trust    | Treasure Island Development Authority       | TIDA  |
| San Francisco Housing Authority                     | SFHA     | University of California at San Francisco   | UCSF  |

**Table 1. Staffing & Budgets**

| Agency          | Urban forestry-related staff positions | FTE equivalent staff performing forestry work | Total department budget | Urban forestry-related budget |
|-----------------|--|---|-------------------------|-------------------------------|
| Caltrans        | 8                                      | 4   | 7000000                 | 500000                        |
| CCSF            | 5                                      | 0   | 800000000               | 10000                         |
| FUF             | 16                                     | 12  | 3690000                 | 2358000                       |
| LHH             | 2                                      | 0   | 252883972               | 80000                         |
| OCII            | 0                                      | 0   | 745000000               | 0                             |
| <b>PG&amp;E</b> |  |   |                         |                               |
| Port            | 0                                      | 3   | 102500021               | 437963                        |
| Trust           | 9                                      | 8   |                         |                               |
| RPD             | 27                                     | 23  | 230857939               | 4600064                       |
| SFHA            | 0                                      | 0   |                         | 0                             |
| SFO             | 0                                      | 1.5   |                         | 30000                         |
| SFMTA           | 3                                      | 3   |                         | 200000                        |
| <b>SFPUC</b>    |  |   |                         |                               |
| SFPW            | 52.24                                  | 41.24   | 374137829               | 21120000                      |
| SFSU            | 4                                      | 3   | 230000                  | 200000                        |
| SFUSD           | 0                                      | 0   | 1000750                 | 60000                         |
| TIDA            | 3                                      | 0.1   | 17049696                | 1530000                       |
| UCSF            | 4                                      | 2   | 1700000                 | 900000                        |
| <b>TOTALS</b>   | <b>128.24</b>                          | <b>100.84</b>                                 | <b>\$2,536,050,207</b>  | <b>\$32,026,027</b>           |



**Table 2. Tree Activities**

| Agency          | Planted | Maintained | Removed | Work performed FOR others (P-planted, M-maintained, R-removed) | Work performed BY others (P-planted, M-maintained, R-removed)  |
|-----------------|---------|------------|---------|--|--|
| Caltrans        | 0       | 20         | 25      |  |  |
| FUF             | 1328    | 2290       | 0       | CALFIRE: P-519, M-97, R-0; SFPW: P-809, M-2193, R-0            |  |
| LHH             | 20      | 100        | 10      |  | Bay Area Arborist Cooperative: P-0, M-40, R-10;  |
| OCII            | 0       | 0          | 0       |  |  |
| <b>PG&amp;E</b> |         |            |         |  |  |
| Port            | 6       | 478        | 37      |  | SF Public Works: P-0, M-0, R-0;  |
| Trust           | 300     | 500        | 200     | National Park Service: P-0, M-0, R-30;                         |  |
| RPD             | 128     | 378        | 159     |  | RPD Capital Division: P-43, M-0, R-93;   |
| SFHA            | 0       | 50         | 5       |  |  |
| SFO             | 20      | 400        | 10      | Caltrans P-20, M-0, R-0  | BARTLETT TREE EXPERTS: P-0, M-0, R-0;  |
| SFMTA           | 0       | 30         | 0       |  |  |
| <b>SFPUC</b>    |         |            |         |  |  |
| SFPW            | 604     | 22688      | 3951    | Human Services Agency: M-4; SFMTA: M-6; PUC M-1, R-20          | Arbor MD: M-1001, R-112; Arborist Now: M-2873, R-497; Arborwell: M-1623, R-246; Bay Area Arborist Cooperative: M-764, R-1474 |
| SFSU            | 0       | 160        | 23      |  | Blue Sky Tree Service: P-0, M-4, R-0; Arborist Now: P-0, M-0, R-1;   |
| SFUSD           | 75      | 300        | 30      |  | SFPW: P-20, Peninsula Tree Care: M-25, R-20  |
| TIDA            | 0       | 10         | 57      |  | JTS Tree Care: P-0, M-0, R-57; Rubicon Landscape: P-0, M-10, R-0;  |

|        |       |        |       |   |
|--------|-------|--------|-------|---|
| UCSF   | 290   | 5000   | 771   |   |
| CCSF   | 10    | 500    | 10    | Christopher Campbell Tree Design: P-0, M-5, R-0;<br>Davey Tree Service: P-0, M-0, R-10; |
| TOTALS | 2,781 | 32,904 | 5,288 |   |

**Table 3. Species Selection & Diversity**

| Agency   | Most Common Species Planted   | Struggling Species   | Experimental Species  |
|----------|---|--|---|
| Caltrans |   | <i>Eucalyptus</i> spp.   |   |
| FUF      | <ul style="list-style-type: none"> <li>• tristania (<i>Tristaniopsis laurina</i>)</li> <li>• Saratoga bay laurel (<i>Laurus nobilis</i>)</li> <li>• magnolia (<i>Magnolia grandiflora</i>)</li> </ul> | <ul style="list-style-type: none"> <li>• <i>Pittosporum undulatum</i> (Pittosporum decline, drought intolerance; also, on Cal-IPC Watch List)</li> </ul> | <ul style="list-style-type: none"> <li>• coast banksia (<i>Banksia integrifolia</i>)</li> <li>• gold medallion tree (<i>Cassia leptophylla</i>)</li> <li>• <i>Chitalpa tashkentensis</i></li> <li>• <i>Elaeocarpus decipiens</i></li> <li>• <i>Quercus tomentella</i></li> <li>• <i>Syzygium smithii</i></li> <li>• <i>Tilia tomentosa</i> 'sterling'</li> <li>• <i>Ulmus</i> 'emerald sunshine'</li> </ul> |
| LHH      | <ul style="list-style-type: none"> <li>• magnolia (<i>Magnolia grandiflora</i>)</li> <li>• Ceanothus 'Ray Hartman'</li> <li>• Arbutus 'Marina'</li> </ul>   | <ul style="list-style-type: none"> <li>• <i>Fremontodendron californicum</i> (short lived and branches break easily)</li> </ul>                          |   |
| OCII     |   | <ul style="list-style-type: none"> <li>• Poplar (Mission Bay – invasive root system)</li> <li>• Sycamore (South Beach – fungus, mildew)</li> </ul>       |   |
| PG&E     |   |  |   |
| Port     | <ul style="list-style-type: none"> <li>• <i>Pittosporum undulatum</i></li> </ul>  | <ul style="list-style-type: none"> <li>• myoporum (<i>Myoporum laetum</i>)</li> <li>• Canary Island palm (<i>Phoenix canariensis</i>)</li> </ul>         |   |
| Trust    | <ul style="list-style-type: none"> <li>• Monterey pine (<i>Pinus radiata</i>)</li> <li>• Monterey cypress (<i>Hesperocyparis macrocarpa</i>)</li> <li>• coast redwood (<i>Sequoia</i>)</li> </ul>     | <ul style="list-style-type: none"> <li>• pine pitch canker</li> <li>• cypress canker</li> </ul>  | <ul style="list-style-type: none"> <li>• Gowan cypress</li> <li>• Sargent's cypress (<i>Cupressus sargentii</i>)</li> <li>• MacNab cypress (<i>Cupressus</i>)</li> </ul>  |

| Agency | Most Common Species Planted   | Struggling Species  | Experimental Species  |
|--------|---|---|---|
|        | <i>sempervirens</i> )   |   | <i>macnabiana</i> )<br>• Santa Cruz cypress   |
| RPD    | <ul style="list-style-type: none"> <li>• Monterey pine (<i>Pinus radiata</i>)</li> <li>• Monterey cypress (<i>Hesperocyparis macrocarpa</i>)</li> <li>• <i>Eucalyptus</i> spp.</li> </ul>   | Experimenting w/resistant Monterey pine   |   |
| SFHA   |   |   |   |
| SFO    | <ul style="list-style-type: none"> <li>• coast live oak (<i>Quercus agrifolia</i>)</li> <li>• California buckeye (<i>Aesculus californica</i>)</li> <li>• <i>Banksia serrata</i></li> </ul> |   |   |
| SFMTA  |   | myoporum ( <i>Myoporum laetum</i> )   |   |
| SFPUC  |   |   |   |
| SFPW   | <p><i>Lophostemon confertus</i><br/><i>Magnolia grandiflora</i><br/><i>Tristanopsis laurina</i></p>   | <p>For the first time ever, Ficus (<i>Ficus microcarpa</i>) trees across the city are showing decline which may be pathological or a delayed stress response to years of drought. This is similar to the citywide decline of Kwanzan Cherry trees observed a few years ago. Arbutus x Marina is disappointing over time with a smaller mature size than expected and incurable trunk canker. On the west side of the city, it is still part of the planting palette due to limited alternatives. Golden raintree (<i>Koelreuteria paniculata</i>) is underperforming too while its relative Chinese Flame tree (<i>Koelreuteria bipinnata</i>) is doing well.</p> | <p>Various Elm varieties are being tested to find suitable replacements for the Chinese Elm (<i>Ulmus parvifolia</i>) trees. Many of the varieties trade one drawback for another, unfortunately. We planted more <i>Quercus tomentella</i>, availability permitting.</p> |

| Agency | Most Common Species Planted            | Struggling Species  | Experimental Species   |
|--------|--|---|--|
| SFSU   | Monterey cypress                       | Monterey pine; Eucalyptus limb drop, messy, overgrown (considering smaller stature species) |  |
| SFUSD  | Redwood, Canary Island pine, red maple | Ficus – splitting<br>Monterey pines – borers<br>Myoporum - thrips                           |  |
| TIDA   | None planted                           |   |  |
| UCSF   | Eucalyptus                             | Arbutus ‘marina’ (Cancer [?], not sustainable)<br>Pittosporums                              | <i>Eucalyptus: brockwayi, leucoxylon ‘rosea’, neglecta, rudis, sideroxylon, woodwardia.</i><br><i>Corymbia: papuana, citrodora.</i><br>We also planted black oak, <i>Acer negundo, Acer macrophyllum</i> |
| CCSF   | Pine and cypress                       | Monterey pine – canker, beetle  |  |



**Alemany Farm**, photo by Peter Brastow

# Attachment 1: 2018/2019 Annual Survey Questions

Sent to agencies and entities that physically manage trees.

- Caltrans
- City College of San Francisco (CCSF)
- Friends of the Urban Forest (FUF)
- Golden Gate National Recreation Area, National Parks Service
- Laguna Honda Hospital (LHH)
- Office of Community Investment and Infrastructure (OCII)
- Pacific Gas and Electric (PG&E)
- Port of San Francisco (Port)
- Presidio Trust (Trust)
- Recreation and Park Department (RPD)
- San Francisco General Hospital (SFGH)
- San Francisco Housing Authority (SFHA)
- San Francisco International Airport (SFO)
- San Francisco Municipal Transportation Agency (SFMTA)
- San Francisco Public Utilities Commission (SFPUC)
- San Francisco Public Works, Bureau of Urban Forestry (SFPW)
- San Francisco State University (SFSU)
- San Francisco Unified School District (SFUSD)
- Treasure Island Development Authority (TIDA)
- University of California, San Francisco (UCSF)



# SF Environment

## Annual Urban Forest Report Survey (2018–2019)

Pursuant to Chapter 12, Section 1209 of the Environment Code, the Department of the Environment is surveying your organization’s forestry program work during the last fiscal year. Thank you for your participation in this process.

Please Return By 08/09/2019

1 I – IV

2 V

3 VI – X

### I. Agency Information:

**Name of Agency/Department/Organization: \***

**Your Name \***

First

Last

**Email \***

### II. Work force:

**A. How many urban forestry–related staff positions does your organization have?**

**B. How many full–time equivalent staff positions work only on tree planting, care, and removal?**

III. Budget:

A. What is your organization's total budget?

B. What is your urban forestry-related budget?

C. Does your urban forestry related budget fund anything other than tree care (such as education or lawn and shrub care)?

- No  
 Yes

D. If "yes," please estimate the percentage or amount of funding listed in your urban forestry related budget (above) spent specifically on tree planting and maintenance.

---

IV. Health and Diversity of the Urban Forest:

A. What are the three most common species of trees you planted this fiscal year?

B. Are there any species you feel are struggling in San Francisco, or species you have decided no longer to plant? Please explain why.

C. Did you experiment with planting any new or less common species this year? If so, what were they?

D. Are you considering climate change, biodiversity and wildlife habitat when selecting your tree species? Please explain.

V. Tree Care (planting, maintenance, and removals):

---

A. How many trees were planted, cared for, and removed within your organization's jurisdiction in FY2018-19?

Do not include tree care performed for other entities by your agency.

**Planted**

**Cared For**

**Removed\***

\*Please describe reasons for tree removals

---

B. If your organization performed urban forestry related work for another entity during the past year, please provide the requested information below. Leave blank if not applicable.

---

Entity 1 Information

**Entity 1 Name**

**Entity 1 Planted**

**Entity 1 Cared For**

**Entity 1 Removed**

---

Entity 2 Information

**Entity 2 Name**

**Entity 2 Planted**

**Entity 2 Cared For**

**Entity 2 Removed**



C. If another entity performed urban forest related work for your organization during the past year, please provide the requested information below. Leave blank if not applicable.

---

**Entity 1 information**

**Entity 1 Name**

**Entity 1 Planted**

**Entity 1 Cared For**

**Entity 1 Removed**

---

**Entity 2 information**

**Entity 2 Name**

**Entity 2 Planted**

**Entity 2 Cared For**

**Entity 2 Removed**

---

**Entity 3 information**

**Entity 3 Name**

**Entity 3 Planted**

## VI. Fiscal Year General Liability Claims

Please answer the questions below if any general liability claims made against your agency due to issues related to trees.

For example, trip and falls on exposed roots or branch failures that damaged persons or personal property.

### A. Total general liability claims related to trees

### B. Total number of paid general liability claims related to trees

### C. Average dollar amount of tree-related claims paid

## VII. Concerns & Limitations

Many organizations have reported similar concerns related to the urban forest and similar limitations when attempting to address these concerns. We are tracking these concerns and limitations over time to identify trends.

### A. Concerns:

|   | not at all concerned       | slightly concerned         | somewhat concerned         | moderately concerned       | extremely concerned        |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Ability to provide adequate care to newly planted trees</b>  | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |
| <b>Ability to provide adequate care to established trees</b>  | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |
| <b>Coordination and efficiency in the way forestry programs operate on a city-wide basis</b>          | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |
| <b>Provision of wildlife habitat via urban forestry management</b>                                    | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |
| <b>Loss of significant numbers of trees due to age and/or disease</b>                                 | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |
| <b>Loss of significant numbers of trees due to vandalism, illegal pruning, and/or illegal removal</b> | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |
| <b>Loss of significant numbers of trees due to development</b>  | <input type="radio"/><br>1 | <input type="radio"/><br>2 | <input type="radio"/><br>3 | <input type="radio"/><br>4 | <input type="radio"/><br>5 |

**B. Limitations:**

|   | not at all<br>1<br>limitation | minor<br>2<br>limitation | medium<br>3<br>limitation | moderate<br>4<br>limitation | serious<br>5<br>limitation |
|---|-------------------------------|--------------------------|---------------------------|-----------------------------|----------------------------|
| <b>Funding constraints</b>  | <input type="radio"/>         | <input type="radio"/>    | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <b>Staffing constraints</b>   | <input type="radio"/>         | <input type="radio"/>    | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <b>Prioritization of urban forestry programs within your agency/the city at large</b> | <input type="radio"/>         | <input type="radio"/>    | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <b>Coordination of efforts to protect and manage the overall urban forest</b>         | <input type="radio"/>         | <input type="radio"/>    | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <b>Tree inventory specific to your agency (if applicable)*</b>                        | <input type="radio"/>         | <input type="radio"/>    | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <b>Management plan specific to your agency (if applicable)*</b>                       | <input type="radio"/>         | <input type="radio"/>    | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

**VIII. Significant Changes**

What, if any, significant changes or accomplishments have taken place within your organization's urban forestry programs in the last fiscal year?

**IX. Topics of Concern**

What topics are of greatest concern in your organization this year?

**X. OPTIONAL**

Do you have any recommendations, comments, or suggestions for us to improve the method of data collection, the annual report, or other processes related to the Annual Urban Forest Report?

# Attachment 2: 2019 Alternative Annual Survey Questions

Sent to the San Francisco Planning Department

## Annual Urban Forest Report Alternative Survey

*Fiscal Year 2018-2019*

**PLEASE RETURN BY 08/05/19**

Pursuant to [Chapter 12, Section 1209 of the Environment Code](#), SF Environment is surveying your organization's forestry program work during the last fiscal year. Thank you for your participation.

**Part I**

**1. Agency Information:**

|  |  |
|--|--|
| <b>Name of Agency/Department/Organization:</b> |  |
| <b>Your Name:</b>                              |  |
| <b>Email:</b>                                  |  |

**2. Work Force & Budget:**

|  |  |
|--|--|
| <b>A. How many urban forestry related staff positions does your organization have?</b>                 |  |
| <b>B. What is the budget for your urban forestry related programming in the 2018-2019 fiscal year?</b> |  |

**3. Assistance to San Francisco-based Urban Forestry Programs or Organizations**

|  |  |
|--|--|
| <b>A. Did you provide <u>TECHNICAL</u> assistance to any urban forestry programs or organizations in San Francisco? If so, please identify the programs and/or organizations and the nature of the assistance.</b> |  |
| <b>B. Did you provide <u>FINANCIAL</u> assistance to any</b>   |  |

|  |  |
|--|--|
| <p>urban forestry programs or organizations in San Francisco? If so, please identify the programs and/or organizations and the nature of the assistance.</p> |  |
|--|--|

**4. Other San Francisco Projects/Programs**

|   |  |
|---|--|
| <p>Did you work on any other projects not discussed in Question III that may affect San Francisco’s urban forest?</p> |  |
| <p>A. If yes, what is the project/program status?</p>   |  |
| <p>B. How can we assist or work with you on these projects/programs?</p>  |  |

**Part 2: Additional Questions**

|  |
|--|
| <p>5. What, if any, significant changes or accomplishments have taken place within your organization’s urban forestry programs in the last fiscal year? <i>For example, staffing or budget changes, new major projects or programs, changes to forestry management programs or oversight, or any significant achievements?</i></p> |
|  |

|  |
|--|
| <p>6. Are you working on regional, statewide, or national issues that we should know about and/or can support locally?</p> |
|  |

**7. What topics are of greatest concern in your organization this year?** *For example, concerns about drought conditions affecting tree health, including increased pest or disease pressure, other tree health concerns, providing wildlife habitat, jurisdictional issues, or public response to an agency plan.*

**8. OPTIONAL: Do you have any recommendations, comments, or suggestions for us to improve the method of data collection, the annual report, or other processes related to the Annual Urban Forest Report?**

**Thank you for your participation. Please return this form and direct any questions to:**

Peter Brastow

Senior Environmental Specialist

*Nature, Ecosystems and Biodiversity*

San Francisco Department of the Environment

[peter.brastow@sfgov.org](mailto:peter.brastow@sfgov.org)

P: 415-355-3733

F: 415-554-6393

