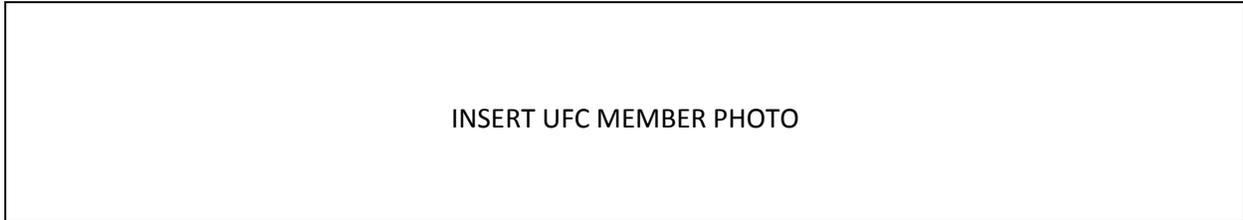


2015 ANNUAL URBAN FOREST REPORT

JULY 1, 2015-JUNE 30, 2016



The **Urban Forestry Council** advises city departments, including the Board of Supervisors and the mayor. Its tasks are to develop a comprehensive urban forest plan; educate the public; develop tree-care standards; identify funding needs, staffing needs, and opportunities for urban forest programs; secure adequate resources for urban forest programs; facilitate coordination of tree-management responsibilities among agencies; and report on the state of the urban forest.



Urban Forestry Council members from left to right:

- Zack Taylor, Park Services Manager, San Francisco Recreation and Park Department
- Andrew Sullivan, Landscape Architect
- Jon Swae, Urban Forest Plan Manager, San Francisco Planning Department
- Tom Carter, Deputy Director, Maintenance, Port of San Francisco
- Dan Flanagan, Executive Director of Friends, the Urban Forest – CHAIR
- Carla Short, Urban Forester, San Francisco Department of Public Works – VICE CHAIR
- Michael Sullivan, Partner, Orrick Law Firm
- Igor Lacan, Urban Forestry Advisor, UC Cooperative Extension
- Rose Hillson, Community Representative
- Malcolm Hillan, Environmental Horticulture Professor, City College of San Francisco
- Dan Kida, Sr. Program Manager, Vegetation Management Quality Control, PG&E
- John Leffingwell, Consulting Arborist, HortScience
- Yolanda Manzone, Public Utilities Commission
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Not pictured:

Urban Forestry Council Staff Support:

- Mei Ling Hui, SF Environment Urban Forestry Council Coordinator
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Cover photo provided by XXX

Submitted to Mayor Edwin M. Lee and the Board of Supervisors by the Department of the Environment, pursuant to San Francisco Environment Code Chapter 12 Sec. 1209.

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Please note: While this report seeks to be as comprehensive as possible, it is based on data provided by responding organizations and does not include complete information on all urban forestry work performed within the City and County of San Francisco. Additionally, some organizations did not provide complete survey responses. In these cases, throughout the report, there are spaces that are blank or where an organization may be entirely omitted from a table or narrative section.

Overview of San Francisco's Urban Forest, FY 2015-2016

SF Environment staff surveyed 22 City departments, public agencies, and non-government organizations that oversee or manage a portion of the urban forest in San Francisco. Organizations were asked to provide information on forestry budget and staffing, maintenance activities, accomplishments, and concerns in fiscal year 2015-2016. Of the 22 organizations surveyed, 17 provided full or partial responses.

This data is tracked to:

- Better understand the resources used to maintain the urban forest across the city.
- Track the priorities, needs, and concerns of city departments and local nonprofits, and monitor how they change over time.
- Better understand threats to the future well-being of our urban forest.
- Find ways to increase the contributions that trees provide to our community.

Primary Findings:

In fiscal year 2015-2016, all reporting organizations planted 2,608 (significant decrease from the 3,277 reported tree plantings last year), removed 1,849 trees (slight increase from the 1,810 reported tree removals last year), and took care of 12,165 trees (decrease from the 14,104 reported trees pruned and otherwise cared for last year.)

Friends of the Urban Forest, SFO, SFUSD, and UCSF increased tree planting this year. General Hospital, SFSU, and Public Works decreased tree planting this year, with a significant reduction for Public Works (last year 1,243 trees planted, this year 520.) Public Works also significantly reduced tree removals this year (last year 1172, this year 488), along with PG&E and RPD who also reduced tree removals. TIDA and UCSF both significantly increase tree removals this year (TIDA 12 last year and 752 this year; UCSF 19 last year 390 this year) along with increased tree removals from SFSU, SFO, Presidio Trust, and General Hospital.

Several urban forestry programs increased staffing this year, including Public Works (25 FTE last year, 28 FTE this year), FUF (12.5 FTE last year, 17 FTE this year), RPD (23 FTE last year, 25 FTE this year), SFO (2 FTE last year, 12 FTE this year). Several programs also increased funding this year, including Public Works (\$4.96M last year, \$15.3M this year), FUF (\$1.54M last year, \$2.3M this year), RPD (\$1.88M last year, \$4.6M this year), SFO (\$125K last year, \$220K this year), SFUSD (\$60K last year, \$90K this year), and TIDA (\$943K last year, \$1.14M this year.)

Forestry managers reporting ongoing tree health concerns due to drought stress, which exacerbated health issues in aging trees and pest problems. Some departments, for example SFO, have moved to replaced trees that require summer water with species that are adapted to dry summer conditions.

In July 2016, the Board of Supervisors approved a measure for the November 2016 ballot. If this measure passes, it will require the City to take responsibility for all street trees, including tree-related

sidewalk repairs and trip-and-fall liability, and create a \$19M set-aside for street tree care with a provision of \$500,000 per year for the San Francisco Unified School District's tree care and maintenance.

List of Participating Organizations

The following organizations and city departments responded to the survey:

- California Department of Transportation, District 4 (CalTrans)
- City College of San Francisco (CCSF)
- San Francisco General Hospital (SFGH)
- Department of Public Works (Public Works)
- Friends of the Urban Forest (FUF)
- Golden Gate National Recreation Area (GGNRA)
- Pacific Gas and Electric (PG&E)
- Presidio Trust (Trust)
- Recreation and Park Department (RPD)
- San Francisco International Airport (SFO)
- San Francisco Planning Department (Planning)
- San Francisco Public Library (SFPL)
- San Francisco Public Utilities Commission (PUC)
- San Francisco Unified School District (SFUSD)
- San Francisco State University (SFSU)
- Treasure Island Development Authority (TIDA)
- University of California, San Francisco (UCSF)

The following organizations and departments did not respond to the survey request:

- Laguna Honda Hospital (LHH)
- Municipal Transportation Agency (MTA)
- Port of San Francisco (PORT)
- San Francisco Housing Authority (SFHA)

Major opportunities and challenges reported by participating organizations

Management of San Francisco's urban forest is divided among many stakeholders who provide direct care to trees within their jurisdiction, as well as nonprofit organizations who engage with agency partners to support forestry activities on city-owned land.

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 reported an increase in tree removal due to severe drought conditions and an increase staffing and funding to manage homeless populations, including concerns with illegal campfires and destruction of water lines for water access. CalTrans is additionally concerned with preventing illegal tree pruning for billboard visibility, which is causing canopy die-back in affected trees.

City College of San Francisco (CCSF) manages several campus locations throughout the city and provided information on their tree management activities for the Ocean Campus. CCSF reported no changes from last year, in which CCSF stated concerns with the health of Monterey Pine and eucalyptus, general low tree canopy cover, and competing land use priorities that may negatively impact tree canopy coverage, and funding for trees and landscaped areas.

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 100K patients a year. The facility completed new hospital construction and landscaping this fiscal year. SFGH reported a priority shift that has increased funding for tree care and pruning this year. Landscape staff have ongoing concerns with the long terms effects of drought conditions, the facility's aging irrigation system, future construction projects that may result in additional tree removal, and monitoring the health of mature notable trees.

San Francisco Public Works (Public Works) 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. The Bureau of Urban Forestry was officially reconstituted as of the beginning of fiscal year 2016-2017, appointing Carla Short as the new Superintendent, who was Public Works previous, long-term Urban Forester. Public Works hired a new Urban Forester, Chris Buck, who was Acting Urban Forester for one year, and an Urban Forestry Inspector for eight years. Public Works has partnered closely with the Planning Department to oversee the City's first city-wide street tree census, which will be complete in late summer 2016. In July 2016, the Board of Supervisors approved a ballot measure for voter consideration in November 2016, which would require the City to take responsibility for all street trees, including tree-related sidewalk repairs and trip-and-fall liability, and provide \$500,000 per year for San Francisco Unified School District tree care and maintenance from a General Fund set-aside of \$19 million for tree care.

Friends of the Urban Forest (FUF) helps individuals and neighborhood groups plant and care for street trees and sidewalk gardens in San Francisco. In the past year, FUF has been heavily focused on advocating for improved management of street tree care with San Francisco residents, neighborhood leaders and government officials. Last year FUF launched new engagement strategies to increase volunteerism and the number of trees planted, such as their new partnership program with community groups PODER & SF Bike Coalition to organize "Bike Plantings", where we utilize bicycles instead of trucks to move people, tools, and trees. FUF also sought to increase tree care work by changing their tree care package to include pruning to five years after planting as standard care, where they previously

supplied standard care to three years, with an option of additional care visits. FUF continued to expand their community-based Sidewalk Landscaping Program to maximize concrete removal in and around existing trees to improve the longevity of street trees while providing improved environmental benefits, such as increased storm water infiltration. Looking forward, FUF is developing new educational programming, including an Arborist Apprentice program for college level interns with a goal of improving street tree care. FUF reported that their primary concern is the condition of the urban forest due to the impacts of drought, climate change, the lack of long-term maintenance and lack of a comprehensive city-supported tree planting program that negatively impact the city's canopy coverage.

The **Golden Gate National Recreation Area** (GGNRA) is the of the largest urban parks in the world, covering 80,000 acres that span San Francisco, San Mateo, and Marin counties, attracting over 14.5M visitors every year. GGNRA sites in San Francisco include the Fort Mason, Land's End, Sutro Baths, Fort Funston, Alcatraz Island, and the Presidio which is primarily managed by the Presidio Trust. GGNRA forestry managers report concern with tree die-off and disease in the lands that they oversee.

Pacific Gas and Electric Company (PG&E) works with property owners to resolve conflicts between trees and power lines. As in past reports, they identified concerns with public safety and service reliability due to conflicts between power lines and trees, especially palm trees, which, due to their structure and growth habit, cannot be effectively pruned away from power lines and may create public safety hazards. PG&E is additionally concerned with safely pruning trees in a dense urban environment where there is little room for contractors to safely perform necessary pruning. This year, PG&E reported an increase in the number of dead and declining trees due to drought stress, which represent potential safety hazards.

SF Planning Department (Planning) develops policies, studies and plans to support the long-term health of the city's urban forest. The Department also provides technical and financial assistance for urban forestry administration and management. Planning has begun scoping work for the Urban Forest Plan Phases II (Parks and Open Spaces) & III (Private Property Trees) and is planning a Pop-up Forest for the Market Street Prototyping Festival in October 2016. This year, the Planning Department initiated the citywide street tree census, EveryTreeSF, in January 2016 which is set to be complete in late summer 2016. Planning is primarily concerned with implementation of the Urban Forest Plan (Phase 1: Street Trees) recommendation to identify and secure dedicated, ongoing, stable maintenance funding for street tree maintenance in San Francisco. In July 2016, the Board of Supervisors approved a ballot initiative that would implement the Urban Forest Plan (Phase 1: Street Trees) by transferring maintenance responsibility for all San Francisco street trees back to the City and creating dedicated funding to do so.

The **Presidio Trust** (Trust) oversees approximately 70,000 trees in the Presidio of San Francisco, the 1,491 acre National Historic Landmark located within GGNRA lands. The Trust actively manages more than 10,000 trees. The Trust cited ongoing concerns with the health of aging trees, drought stress, and wind stress.

The **San Francisco Public Utilities Commission** (PUC) manages trees and green space around reservoirs. The PUC's primarily urban forestry concern is the rising costs associated with management of trees that are diseased and at the end of their life span. To help address this, the PUC's City Distribution Division increased their budget for work orders to RPD's tree crew again this year, to better manage the aging and diseased trees on PUC properties. The PUC is concerned with increasing cost for management of diseased and senescing trees, with an expanded scope of work based off the completed Lake Merced tree survey. The PUC's Natural Resources and Lands Management Division have hired a new San Francisco Lands Manager Position (Damon Spigelman) who will be working on holdings such as Lake

Merced, Laguna Honda Twin Peaks, and working with other City entities such as RPD and other divisions of the PUC.

The **Recreation and Parks Department** (RPD) maintains over 3,400 acres of open space with an estimated 131,000 trees in San Francisco. RPD is primarily concerned with increasing staffing and budget. RPD reporting ongoing concerns with tree loss due to age, disease, and drought stress.

The **San Francisco International Airport** (SFO) manages natural areas, trees, and landscaped areas surrounding the San Francisco Airport. SFO was subject to severe water use restrictions in the past year, which limited regular watering during the dry summer months and reported challenges in managing mature trees that were planted without consideration of potential future drought conditions. Drought stress is causing increased pest populations on some of the airport's landscape trees, with Redwoods particularly impacted by scale insects. In response, SFO has shifted new tree plantings to species that are better adapted to dry summer conditions and are advocating for establishment of minimum soil volume levels for urban planted trees, which can also help reduce drought stress.

The **San Francisco Public Library** (SFPL) includes the 28 library locations, many of which have trees and landscaping. The SFPL primary landscaping concerns surround ensuring street tree species are well adapted to sidewalk growing conditions, noting particular issues with ficus trees planted at library locations.

The **San Francisco Unified School District** (SFUSD) provides care and maintenance for approximately 3,000 trees on 430 acres of school district property. As in past years, SFUSD remains highly concerned with ongoing staffing and funding needs for forestry work, though they have been budgeted an additional \$35k to remove dead, dying, and hazardous trees this year. SFUSD is additionally concerned with increasing new tree planting to replace the removed trees.

San Francisco State University's (SFSU) urban forestry maintenance program productivity was reduced this year, due to failing equipment and loss of one (out of two total) tree trimmers who work at the university. The University contracted WRT Landscape Architecture firm to create a landscape and forest management master plan. WRT held three information-gathering meetings and the final report is set to be released in Fall 2016. be completed in the Fall. The University continues to remove hazardous old-growth trees, to increase pedestrian safety and reduce property damages. SFSU is concerned with increasing damage from drought stressing on campus Redwoods and Monterey Pines and damage to paved areas caused by tree root growth.

The **Treasure Island Development Authority** (TIDA) oversees the care of all trees on Treasure Island and the majority of trees on Yerba Buena Island. Of importance to TIDA is assuring proper, thoughtful implementation of the Habitat Management Plan, including revegetation and tree replanting elements of that Plan. TIDA commenced implementation of the initial sub phases of the Treasure Island Development Project, which has included necessary removal of trees on both Treasure and Yerba Buena Island. At the same time, TIDA, master developer Treasure Island Community Development LLC, and SF Environment's Senior Biodiversity Manager have begun collaborative work on the planning and implementation of the Yerba Buena Island Habitat Management Plan which calls for the ultimate protection, enhancement and restoration of natural areas on Yerba Buena Island, including eventual replanting of approximately 1,500 trees within this first sub phase of work. TIDA adopted the Treasure Island Tree Removal Policy in September 2015, which specifies the Public Notice procedures required ahead of on-island tree removals, both for development-project purposes and day-to-day operational purposes. The procedures contemplate specific tree-removal scenarios and their associated pre-removal

public notice methods, including work area postings and, in certain circumstances, postings of individual trees. The Policy includes specific Public Notice requirements for contemplated removals of specially categorized trees initially contemplated for preservation, enhancement or relocation, either by HMP or as part of the project's larger cultural purposes. In addition to coast live oak, Yerba Buena Island harbors willows, large toyons, blue elderberry and California buckeyes. SF Environment has documented almost 20 individual buckeye trees on Yerba Buena Island. A famed grove of three apparent "old growth" buckeyes occurs along MaCalla Road, though one of the tree trees failed last winter due to a split trunk. This winter one of the three trees failed. First the east half of the tree fell over splitting the trunk. TIDA made plans to leave the tree in place as habitat, but subsequently the western side of the tree failed as well. TIDA now plans to remove the tree and try to find a creative reuse and to increase care for the remaining two trees, which have large eucalyptus limbs hanging into them. In December 2015, TIDA staff harvested olives from approximately 6 on-Island olive trees and subsequently tested the olives for known contaminants. All test results indicated no contamination in these olives. TIDA intends to continue this program of harvest and testing of on-Island olive trees in order to collect appropriate data on the olives ahead of potential future "farm-to-table" use of olives from these trees on-Island.

The **University of California, San Francisco** (UCSF) owns a largely undeveloped 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. UCSF has ongoing concerns with an ageing urban forest on the Parnassus campus, extreme drought stress, disease and pests, mitigating fire hazards, community engagement and funding constraints. UCSF added additional staff to in-house forestry management operations and hired contract forester and consulting arborists to draft management plan for Mt. Sutro. The Draft Management Plan was released in summer 2016 and UCSF will begin the EIR process in Fall 2016.

Table 1: Respondents were asked about staffing and budget

Department	Urban forest-related staff positions	# Staff (or FTE equiv) performing forestry work	Total department budget	Urban forestry related budget	Est. % of UF budget spent on tree planting, care, and removal	
					Amount	%
CalTrans	4-7	3*	\$7*	\$0	0	N/A
CCSF	2	0	\$900K	\$10k	\$10k	100%
DPH-GH	2.5	0.25	\$600M	\$80K + staff salaries	\$10K	12.5%
Public Works	28	19	\$241.34M	\$15.17M	\$3.03M	~20%
FUF	17	6	\$2.3M	\$2.3M	\$2.3M	100%
GGNRA	5	0				
PG&E	1**	3	"Varies"			
Planning	.25 FTE	N/A	\$200k	N/A	N/A	N/A
Presidio	10	10				
SFPUC	.25	0		274K	274K	100%
RPD	25	25	\$178.7M	\$4.6M		100%
SFO	12	2	"N/A"	\$220k		25%
SFPL	0	0	\$125M	0	0	0%
SFUSD	0	0	\$1M	\$95K	\$95K	100%
SFSU	5	1	\$1.8M	\$200K		
TIDA	2	0	\$15.44M	\$1.14M		~30%
UCSF	5	5	\$8M	~\$220	~\$220K	100%
TOTAL	118.5 FTE	74.25 FTE	\$852.54M	\$23.93M	\$10.92M	-

*For San Mateo and San Francisco Counties

**PG&E has one on-staff forester who oversees contractors.

Table 2: Respondents were asked about work plans

Dept.	How many trees within the department's purview were:			Work the department performed for others:	Work other organizations performed for the department/org:
	Planted	Cared for	Removed		
Caltrans	0	Unknown	20--25 *Vandalized and dead from drought conditions, bark Beetle, etc. Pines and cypresses.	1 tree for community org	None
CCSF	5	20	4	No answer	Contractors cared for 20
DPH-GH	23	30	39	None	Public Works planted 7 trees; Contractors cared for 5, removed 16
DPW	520	2,102 pruned 1,488 watered	488 *144 total fines were issued for excessive pruning, illegal removals and failure to protect trees during construction.	SFPUC: cared for 41, removed 10; SFMTA: cared for 17, removed 5; SFFD: cared for 5, removed 2; SFPD: cared for 13, removed 6; DT: cared for 1	None
FUF	1242	3,423	0	SFE: planted 203, cared for 242 Community orgs: planted 4, cared for 4	None
GGNRA	<5	~15	>10	None	None
PG&E		1,850	90	None	Private contractors cared for 1850 and removed 90.
Presidio	300	1,000	150	None	Volunteers planted 100 and cared for 300

PUC-CDD	0	25	30	None	RPD cared for 100 and removed 20; Public Works removed 6; Private contractors removed 4.
RPD	214	304	147	None	RPD Capital performed tree work; data not available or included here
SFO	115	~500	~91	CALTRANS: planted 100; cared for 200; removed 80	none
SFPL	0	0	0	No answer	No answer
SFUSD	125	175	75	No answer	Private contractors cared for 35 and removed 60 trees; FUF planted 65 and took care of 20 trees.
SFSU	19	133	78	No answer	FUF: cared for 61 Private contractors: cared for 10, removed 63.
TIDA	0	~400	752	None	Public Works: removed 155; Private contractors: cared for ~400 and removed 597.
UCSF	40	725	390	None	Private contractors cared for 459 trees and removed 354 trees.
TOTAL	2608 Planted	12165 Cared for	1849 Removed	-	-

Table 3: Respondents were asked about species selection

Department	Most commonly planted species	Struggling species	Experimental species
Caltrans	None	Eucalyptus due to fire danger and weak limbs under drought conditions.	None
CCSF	None	Monterey Pine and Eucalyptus	None
DPH-GH	Podocarpus elongate 'Blue Ice' Cercis occidentalis Tibouchina	Pines Brugmansia Redwoods	Grevillea Calocedrus decurrens
DPW	Lophostemon confertus Tristaniopsis laurina Magnolia grandiflora	<i>Prunus serrulata</i> 'Kwanzan' and <i>Pyrus calleryana</i> had early bud break due to cold winter. Infrequent issues with <i>Arbutus</i> 'Marina' and <i>Eriobotrya deflexa</i>	None
FUF	Tristania laurina Arbutus 'Marina' Lagunaria patersonii	Pyrus k. and Pyrus c. reduced due to disease chill factor. Prunus c. 'KV' short lived. Prunus serrulata 'Kwanzan' uneven performer	None
GGNRA	No answer	Blue gum Eucs	No answer
PG&E	No answer	No answer	No answer
Presidio	Monterey cypress, Sargent's cypress, Gowen cypress	Shore pine	Bishop pine
PUC-CDD	None	Monterey Pine, Monterey Cypress and Myoporum.	No

RPD	Pine, Cypress, Oak	Pine	Canker resistant Pine
SFO	Catalina Ironwood; Coast Live Oak; Madrone	Eastern Redbud; Coastal Redwood	No new species this year
SFPL	No trees planted	Ficus	No
SFUSD	Cedrus deodara, Podocarpus macrophyllus	Monterey Pine, Monterey Cypress, Ficus, Myoporum	Cedrus deodara
SFSU	Monterey Cypress, Apples, Ginkgo	Monterey Pines, Redwoods, and Acacia	No
TIDA	No tree planted	No	None
UCSF	Coast live oak, buckeye, Ca. bay, redwood	Metrosideros	Big leaf maple, willows

Table 4: Respondents were asked to rate commonly cited urban forest-related concerns on a 1-5 scale, with 1 being "not significant" and 5 being "extremely significant"

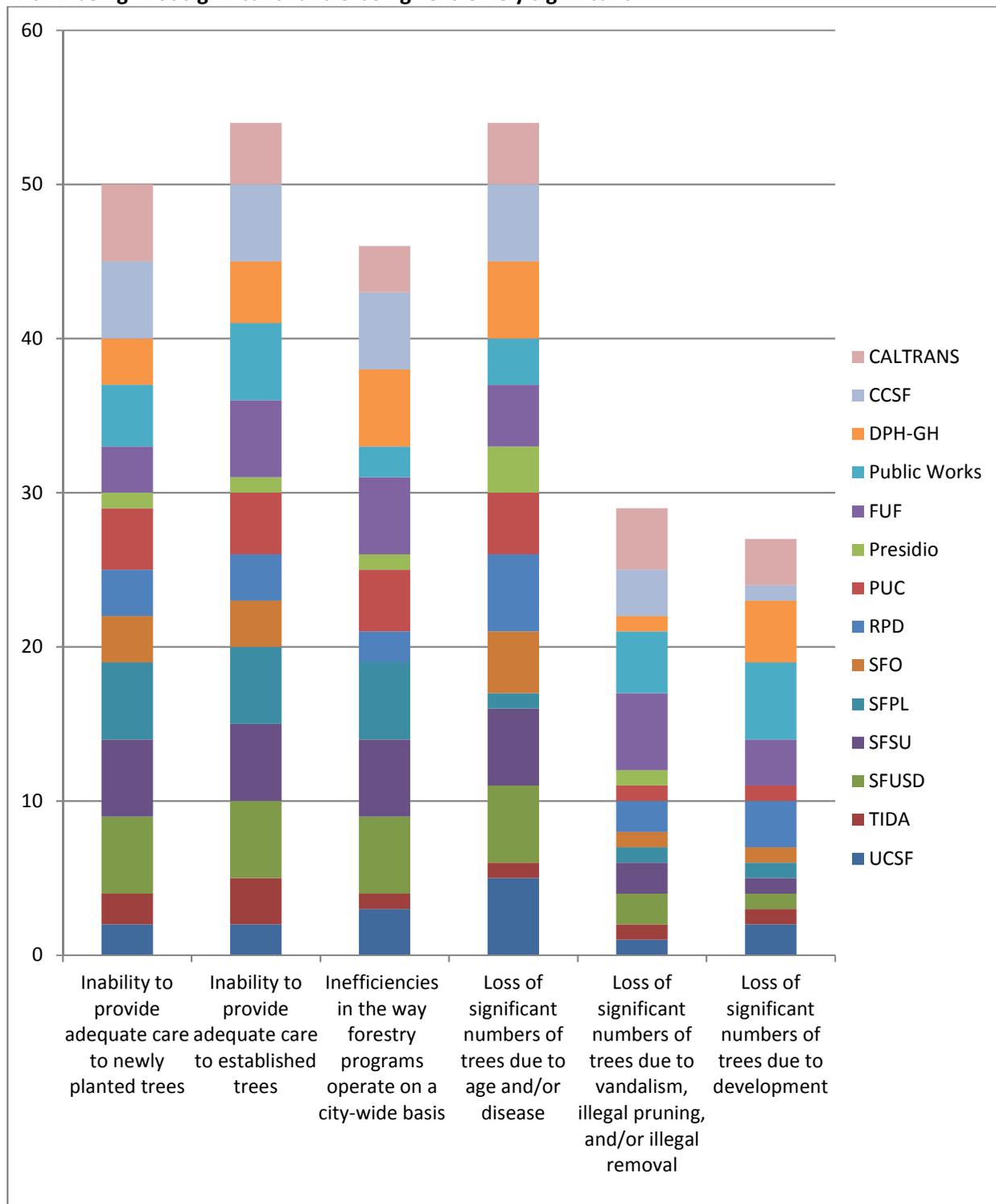


Table 5: Respondents were asked to rate commonly cited limitations on a 1-5 scale, with 1 being "not significant" and 5 being "extremely significant"

