

2014 ANNUAL URBAN FOREST REPORT

JULY 1, 2013-JUNE 30, 2014



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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.

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



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Please note: While this report seeks to be as comprehensive as possible, it is based on data provided by responding agencies and does not include complete information on all urban forestry work performed within the San Francisco.

Overview of San Francisco's Urban Forest, FY 2013-2014

SF Environment staff surveyed 20 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 2013-2014. Of the 20 organizations surveyed, 18 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 2013-2014, all reporting organizations **planted 3,146 trees (decreased from last year), removed 3,028 trees (increased from last year), and took care of 16,373 trees.**

Several forestry programs increased funding and/or staffing levels. San Francisco agencies reported approximately 129 full-time staff equivalent (FTE) positions that dedicated a portion of their time to urban forest programs. Of these staff positions, approximately 98.5 FTEs are dedicated to planting and maintaining trees.

Despite this positive trend in staffing and funding levels, resources to manage the urban forest remain inadequate. As in all previous Annual Urban Forest Reports, departments and agencies continue to identify funding and staffing constraints as their greatest limitations.

Forest managers reported significant concern for tree health, citing extreme drought stress, aging tree populations, and pests/diseases that are affecting several species, including myoporum (thrips), Monterey Pine (pine pitch canker), palm trees (fusarium), and pear trees (fireblight). **Several responding organizations reported declining health in redwood trees and stands due to drought stress** and unidentified disease issues. Out of the fifteen responding forest managers, ten identified significant concerns with pests and diseases. While this is consistent with previous years, this year many tree managers also reported increasing removal of diseased trees for hazard mitigation.

Reported tree planting and removal activities indicate that the urban forest is shrinking. Among the organizations that responded to last year's and this year's report survey, reported tree **planting decreased by 20.1%**, while tree removal continues the trend from last year of increasing by a significant margin. This year, **tree removal increased by over 100%**. (Last year, tree removal increased 79% from the previous year.) San Francisco has a relatively small tree canopy compared to other major metropolitan areas, which reduces the benefits the city

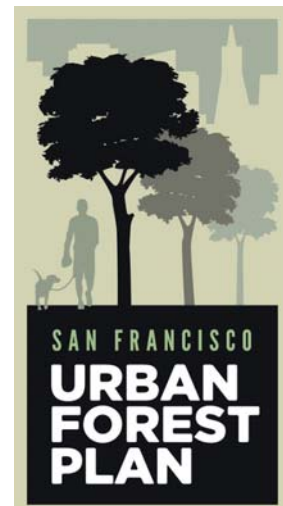
can derive from the urban forest. Though reported tree planting still exceeds reported tree removal, it is likely that untracked, illegal tree removals exceed tree planting efforts. Even if tree planting stayed on par with removal, newly planted young trees cannot provide the same level of benefits as large, mature trees. **The City must increase the percentage of trees that are healthy enough to survive and be retained as mature trees. To achieve this, it is imperative that the City increase resources for tree care and management to improve tree health and reduce the number of trees lost to neglect and illegal removal.**

There are an estimated 105,000 street trees currently within the public rights-of-way, and the Department of Public Works presently cares for and maintains roughly 33,000 of these trees. **Due to historic and ongoing declines in stable resources and budget cut backs, Public Works can only maintain and prune trees on a 10-12 year cycle, instead of the necessary 3-5 year cycle. Based on the lack of available staff to effectively maintain trees, Public Works created the tree maintenance transfer plan in 2010.** Public Works can initiate the transfer of trees to adjacent property owners when the trees have been evaluated by a Certified Arborist and the trees are in good condition, have been recently pruned or do not require pruning at this time, and have not caused sidewalk damage that has yet to be repaired. Due to repeated budget cuts over the last several years, many DPW trees evaluated for transfer will require pruning or sidewalk repairs before they are candidates for transfer.

Summary of the program to date:

- **2,203 Trees transferred to private property owners FY 12-13**
- **1,466 Transferred to other City agencies FY 13-14**
- **3,052 Trees posted for transfer to property owners by June 2014**
- **18,647 Trees to remain DPW maintenance (in medians, adjacent to public properties, etc.)**

The Urban Forest Plan, Phase 1: Street Trees was completed in May 2014. The Urban Forestry Council has endorsed the Urban Forest Plan by resolution and urges the Board of Supervisors and the Planning Commission to adopt and implement the Plan, prioritize stable funding for urban forestry programs, and prioritize completion of the next two phases of the Urban Forest Plan (Parks & Open Spaces, Private Property & Buildings).



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)
- Department of Public Health, General Hospital (DPH-GH)
- Department of Public Works (DPW)
- Friends of the Urban Forest (FUF)
- Municipal Transportation Agency (MTA)
- Office of Community Investment and Infrastructure (OCII) (Successor Agency to the San Francisco Redevelopment Agency)
- Pacific Gas and Electric (PG&E)
- Port of San Francisco (PORT)
- Presidio Trust (Trust)
- Recreation and Park Department (RPD)
- San Francisco International Airport (SFO)
- San Francisco Planning Department
- 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:

- Department of Public Health, Laguna Honda Hospital (DPH-LH)
- Golden Gate National Recreation Area, Fort Mason (GGNRA)

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. This year, Caltrans increased spraying and mulch application to reduce weeds and mitigate fire danger, with a high priority on managing drought issues. Watering was targeted and minimized. Caltrans worked with the City on a planting at McKinley Square where approximately 20-30 diseased pine trees were removed.

City College of San Francisco removed several Monterey Pine trees from the Phelan Avenue campus this year. As in previous years, they remain concerned with the low tree canopy cover and low prioritization of urban forestry programs across the city. CCSF staff note a need for improved tree management policy and adoption of a citywide forestry management plan to address these issues.

The **San Francisco Department of Public Health** (SFDPH) has multiple facilities with on-site trees, though the General Hospital facility was the only site to respond to this year's survey. This year, adjacent street tree care was relinquished to the Hospital from DPW, who provided complete pruning care, as well as developing a comprehensive tree care for the future. The Hospital hired a Certified Arborist to fill their 2nd full-time gardening staff position. Hospital gardening staff is concerned with the health of several pine trees that are in decline due to bark beetle infestation, which will all need to be removed, several eucalyptus that are in declining health, severe drought stress affecting approximately 100 redwood trees, and ongoing construction which is causing continuing losses of mature trees on their campus. They additionally note a need to improve forestry management policies to better manage these concerns, especially in drought conditions.

The **Department of Public Works** (DPW) 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 providing emergency street tree response. Public Works has continued to transfer the maintenance responsibility of formerly Public Works maintained street trees to adjacent property owners, and remains concerned about public response to the tree maintenance transfer, lack of funding, and long term financing for tree care. Their Urban Forestry inspection staff has improved efficiency through use of electronic tablets in the field for the last year. The tablets contain Public Works' full tree database, allowing them to access open service requests and permits. Additionally, when evaluating trees and a site, they can take photos and associate them with the specific trees in their tree database, write comments and generate letters to property owners – all while on location. Public Works is excited about the Urban Forest Plan that was finalized and published this year with the help of the Planning Department, Friends of the Urban Forest, and the Urban Forestry Council, among others.

Friends of the Urban Forest (FUF) helps individuals and neighborhood groups plant and care for street trees and sidewalk gardens in San Francisco. FUF has further refined their community-based Sidewalk Landscaping Program to maximize concrete removal in and around existing trees improving the longevity of street trees. This program provided important environmental benefits, including groundwater recharge. They have made improvements to their tree care program, including better GIS Mapping that aided in increased staff efficiency. Additionally, FUF has incorporated tree care volunteer programming with tree planting events, to improve 'tree care awareness' to new tree stewards. FUF's key focus in the coming months will be to draw attention to problems with the way the City maintains street trees, with an end goal of proposing a solution based on the recently published Urban Forest Master Plan, Phase 1: Street Trees.

The **Municipal Transportation Agency (MTA)** has hired additional employees to improve the management of their landscaped areas, though note a continuing concern with staffing levels.

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. 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. PG&E is additionally concerned with safely pruning trees near cars that are parked alongside the curb.

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. In collaboration with DPW, FUF, and the UFC, the Department completed the Urban Forest Plan (Phase 1: Street Trees) in May 2014. The Department also recently completed an Urban Wood Re-Use Study in collaboration with the Presidio Graduate School. The Parks Tree Finance Study (2014) managed by the Department in partnership with RPD resulted in a \$1M infusion of funds to contract tree work in city parks. As in previous years, Planning remains concerned with secure, ongoing maintenance funding for street trees and parks trees. Planning will be focused on gaining endorsement/adoption of the Urban Forest Plan by Planning Commission & Board of Supervisors, completing the Citywide Street Tree Census (2105) and pursuing funding for Phases 2 & 3 of the Urban Forest Plan.

The **Port of San Francisco (PORT)** manages the care of trees along the San Francisco Bay waterfront. The Port continues to be highly concerned with escalating loss of palm trees, due to *Fusarium* wilt fungal infections. This year, the PORT successfully created new annual capital project funding for the replacement of the dead palm trees on the Embarcadero. They have secured \$135K for fiscal year 2014-2015 and \$175K for fiscal year 2015-2016, to work with the

Department of Public Works on improving tree health and care, along with planting replacement trees.

The **Presidio Trust** (Trust) oversees approximately 70K trees in the Presidio of San Francisco, 1,491 acre National Historic Landmark located within GGNRA lands. The Trust actively manages more than 10K trees. The Trust has been engaged in ambitious reforestation work based on their Vegetation Management Plan, which was adopted in 2011. Their greatest concern is the age and vitality of the Presidio's Historic Forest. The Trust reports that natural regeneration in the Presidio's forested areas has been limited and without intervention the aging forest will decline, noting specific concerns with declining coniferous tree health.

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, to better manage the aging and diseased trees on PUC properties.

The **Recreation and Parks Department** (RPD) FY14-15 budget included \$605,443 in additional resources to fund 5 new positions: four 3434 Arborist Technicians and one 3426 Urban Forester. Additionally, RPD received one-time funding of \$1M to fund contract tree work per the recommendation of the Financing the Urban Forest – Park Trees Report that was published in February 2014. Though these are significant successes, funding and staffing levels are still inadequate to properly manage trees within their jurisdiction and RPD continues to be concerned with the safety of a senescing park tree canopy.

The **San Francisco International Airport** (SFO) manages natural areas, trees, and landscaped areas surrounding the San Francisco Airport. SFO is focused on improving pollution and pest management within difficult environmental conditions. They are very concerned with the drought and have been closely monitoring on-site water use. As landscape trees grow in areas adjacent to roadways and signage, SFO focuses on ensuring visibility and safety of these vital structures while improving the health of the trees and open space under their management. SFO has devoted an increased amount of resources into managing onsite Redwood trees with biochar soil injections and deep root fertilizing.

The **San Francisco Unified School District** (SFUSD) provides care and maintenance for approximately 3K 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. The school district's budget for tree management has been only nominally increased in years, despite mounting tree maintenance requirements. Because of this, SFUSD has concerns with maintaining all of the large trees on their school campuses.

San Francisco State University (SFSU) reports that they have increased tree planting on the campus, planting 45 trees this fiscal year. They are concerned with the poor health of redwood trees on campus, which they do not believe is the result of drought stressing.

The **Treasure Island Development Authority (TIDA)** oversees the care of all trees on Treasure Island. TIDA seeks to maintain the health of their existing trees and identify solutions to mitigate tree disease within their property. For fiscal year 2014-2015, TIDA has allocated approximately \$321K that will be work ordered to DPW to implement a Treasure Island Tree Maintenance Program, allowing TIDA to assess their trees Island wide, remove dead trees, and prune tree limbs to both mitigate hazards to facilities and overhead utility infrastructure as well as to further beautify the Island. They are concerned with maintaining tree health, including understanding the causes of tree disease and identifying solutions to mitigate potential property damage that could be caused by tree failure. TIDA planted 11 new lemon trees on the island as part of the Just One Tree Program. Whenever possible, removed trees are mulched or chipped and provided to Rubicon Landscaping and Treasure Island Job Corps Urban Farm for re-use of mulch/chips.

The **University of California, San Francisco (UCSF)** owns a largely undeveloped 61-acre 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 reports that they began implementing urgent fire safety measures in August/September 2013.

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	%
Cal Trans	4	2.5	5M*			20%
CCSF	2	0	900M	10K	10K	100%
DPH-GH	2.5	0	1M	100K	45K	45%
DPW	47	36	159.4M	9.5M	4.8M	51%
FUF	13	6	1.8M	1.3M	1.3M	100%
MTA	3	0.02		200K	20K	10%
OCII	0	0	311M			
PG&E	1	5				
Planning	0.4			225K		
PORT	2	0	93.8M	144K	40K	28%
Presidio	10	9		1.2M	1.2M	100%
PUC	0	0		114K	114K	100%
RPD	33	33	163.2M	4.6M	914.6K	20%
SFO	2	0		125K	25K	20%
SFUSD	0	0	1M	60K	60K	100%
SFSU	2	2	900K			
TIDA	2	0	16.3M	1M	317.8K	30%
UCSF	5	5	8M	150K	150K	100%
TOTAL:	128.90	98.52	1,645.2M	17.6M	9M	

*Figure is for all of the CalTrans District 4, Southwest Region, including San Francisco, San Mateo, and Santa Clara counties.

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 departments performed for the departments or org:
	Planted	Cared for	Removed		
Caltrans	153	75	35		SFO planted 50 trees, cared for 50 trees, and removed 3 trees
CCSF	4	500	15		Davey Tree removed 12 trees; Chris Campbell removed 3 trees
DPH-GH	6	75	8		DPW cared for 30 trees and removed 4; Davey's tree service removed 2 trees
DPW*	1869	2,337	1124	DPW provided forestry services to eight public agencies	FUF planted 1029 trees not included in DPW's planting numbers, included below in FUF's data.
FUF	1077	3,000	0	SF DOE (Not in the Public ROW) - planted and cared for 48 trees; remaining 1029 trees planted on DPW jurisdiction	
MTA	11	37	2		DPW removed 2 trees
OCII	0	0	0		
PG&E		2,000	136		Utility Tree Service provided care for 2K trees and removed 136 trees; WECl prescribed tree work
PORT	50	200	6		DPW planted 2, cared for 175, and removed 5.

Dept.	How many trees within the department's purview were:			Work the department performed for others:	Work other departments performed for the departments or org
	Planted	Cared for	Removed		
Presidio	300	4,500	182		
PUC	0	100	25		SFRPD cared for ~100 and removed ~25.
RPD	573	154	178		SFRPD Capital Division planted 302, cared for 20, removed 26 for hazard abatement
SFO	50	500	10	Cal trans as noted above	
SFUSD	30	1650	10		Peninsula Tree Care cared for 25 and removed 10; FUF planted 30.
SFSU	45	250	15		
TIDA	11	600	24		DPW cared for ~200 and removed 24; Rubicon Landscaping cared for ~400; Just One Tree Planted 11.
UCSF	44	395	1258		Private contractors planted 24, cared for 191, and removed 1248 Community volunteers planted 20.
TOTAL:	3146	16373	3028		

*Of the 1869 planted trees reported by DPW: 981 were planted by DPW staff, 251 were permits issued to private property owners to plant new trees, and 637 were permits were issued to plant replacement trees.

Of the 1124 tree removals reported by DPW: 130 were removed by DPW staff, 637 were permits issued to remove trees that were replanted, and 331 were permits issued to removal trees that were not replanted. An additional 26 trees were known illegal tree removals; DPW reports that there were likely additional illegal tree removals.

In addition to those noted in this chart, DPW provided services to:

SF Housing Authority - cared for 25, removed 4; SF Fire Department - cared for 5, removed 3; SF Public Library - cared for 8

Table 3: Respondents were asked about species selection

Department	Most commonly planted species	Struggling species	Experimental species
Caltrans	Elms, Pines and Redwoods	Eucalyptus and palms	No
CCSF	Cypress 2 Metrocidros 2 Jacaranda Trees street tree replacement only.	"all"	No-no budget
DPH-GH	3 apple trees, 1 plum, 1 birch	Struggling: Pines, Plane, Palms Plant no more: Purple leaf plum, palms, Maytens, Brugmansia	Planted fruit trees and Agonis flexuosa 'Jervis Bay After Dark.' Will plant Calocedrus decurrens
DPW	Lophostemon confertus Tristanopsis laurina Pittosporum undulatum	Myoporum laetum, continuing to be severely impacted by thrips, but we haven't planted this species in a long time. Pyrus calleryana – continues to be impacted by fireblight, although 'New Bradford' is supposed to be more resistant.	Ceiba speciosa were planted in the Cesar Chavez St. median as part of the Streetscape improvements. Not appropriate for placement in the sidewalk, but the median may provide enough room for the root system.
FUF	Arbutus 'Marina', Tristania laurina, Magnolia g. 'Little Gem', Olea e. 'Majestic Beauty' (fruitless var.), Tristania l. 'Elegant', Lagunaria pattersonii, Ginkgo b. 'Autumn Gold'	Myoporum (Obviously), Pyrus k. and Pyrus c. we have reduced greatly due to disease. Prunus c. 'KV', Acer buergerianum, Jacaranda, Ceanothus 'Ray Hartman' (in sidewalks) and Magnolia doltsopa.	Zelcova a., Eriobotrya d., Pistacia c., Agonis f., Lagunaria p.,

Department	Most commonly planted species	Struggling species	Experimental species
MTA	Podocarpus, liquidambar, Dodonea	no	no
OCII	"Unknown"	Poplar (Mission Bay – invasive root system) Sycamore (Rincon Point – fungus/mildew)	"Unknown"
PG&E	No answer provided	No answer provided	No answer provided
PORT	Olive, Olea europaea Catalina Iron wood, Lyonothamnus floribundusand Monterey Cypress, Cupressus macrocarpa	Phoenix canariensis, canary island date palm due to Fusarium wilt. Myoporum laetum, the lollipop tree due to thrip infection.	Canary Island Pine Catalina Ironwood Olive
Presidio	Monterey cypress, Shore pine, Bishop pine	Lophostemon confertus	Maritime pine, Sargent's cypress, MacNab's cypress
PUC	None	No	No
RPD	Monterey Cypress, Live Oak, and Coast Redwood	Monterey Pine (Pine Pitch Canker) Myoporum (Myoporum Thrip)	Canker-inoculated/resistant Monterey Pine
SFO	Quercus agrifolia, Platanus racemosa, prunus ilicifolia lyonii (catalina cherry)	No answer provided	We planted some Wollemi pines
SFUSD	Arbutus Marina Olea europaea	Myoporum, Ficus, Pine, or any large tree due to maintenance problems.	no
SFSU	Cupressus marrocarpa Magnolia stellate Arbutus x 'Marina'	No	Castanea sativa 'Walker Loves'

Department	Most commonly planted species	Struggling species	Experimental species
TIDA	Lemon tree.	We likely would not re-plant eucalyptus based on past experience.	Lemon trees were planted on-Island as part of the Just One Tree program. It will be interesting to see their development in the on-Island climate.
UCSF	Redwood, buckeye, elderberry	Metrosideros	"To be determined"

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”

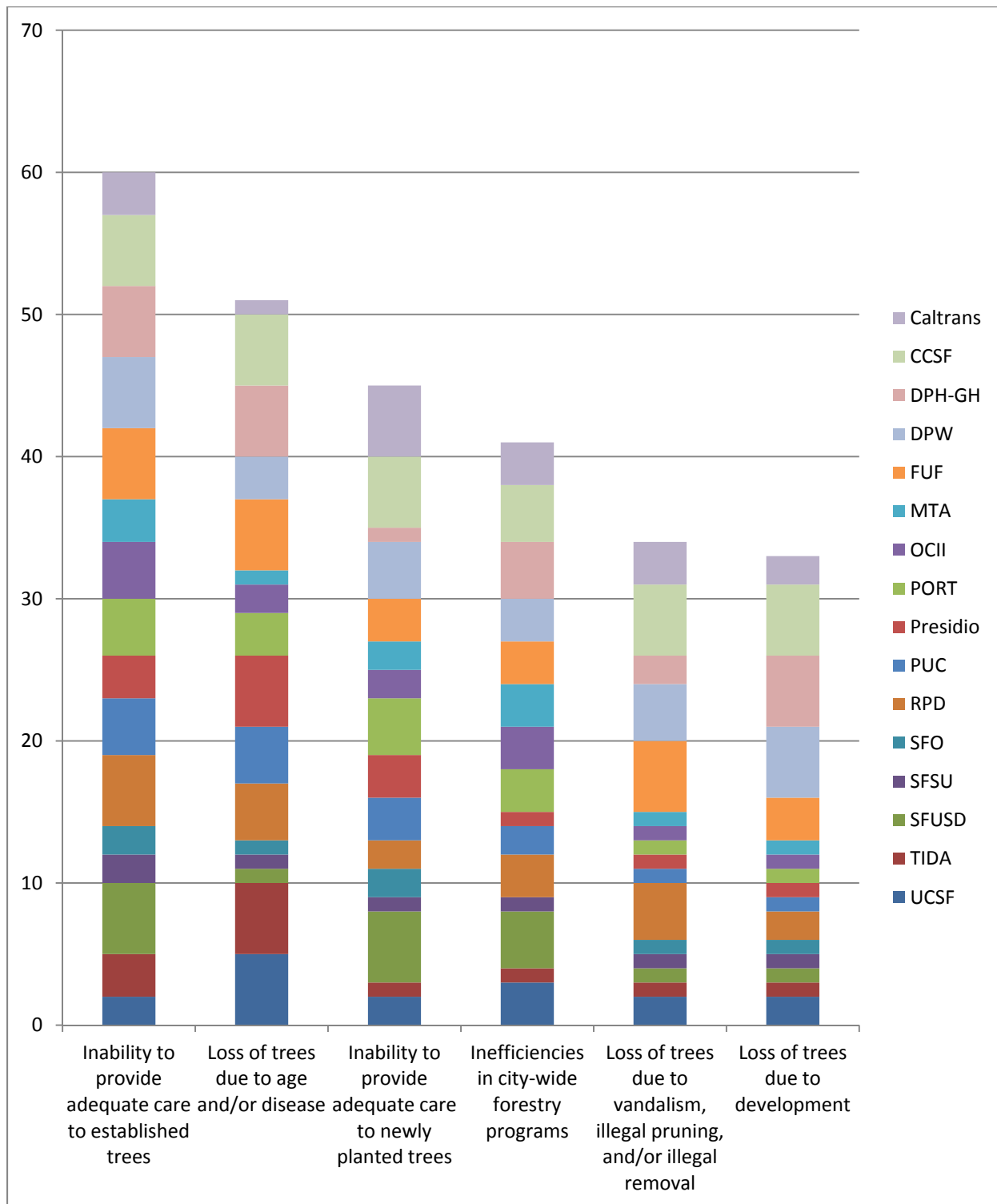


Table 5: Respondents were asked to rate commonly cited limitations on a 1-5 scale, with 1 being “not significant” and 5 being “extremely significant”

