

City of San Diego Urban Forest Management Plan

Goals, Objectives, and Actions

DRAFT-January 2015

The Conservation Element of the 2008 General Plan includes CE-J.1-5 Urban Forestry, with the overall goal of “protection and expansion of a sustainable urban forest.” There are five policies in that element, and they drive the objectives and actions in the Urban Forest Management Plan.

CE-J.1. Develop, nurture, and protect a sustainable urban/community forest.

- a. Seek resources and take actions needed to plant, care for, and protect trees in the public rights-of-way and parks and those of significant importance in our communities.
- b. Plant large canopy shade trees, where appropriate and with consideration of habitat and water conservation goals to maximize environmental benefits.
- c. Seek to retain significant and mature trees.
- d. Provide forest linkages to connect and enhance public parks, plazas, and recreation and open space areas.

[Objectives listed immediately under the goals CE-J.1 through CE-J.5 are from the 2008 General Plan.]

CE-J.1. Objectives:

1. ***Inventory all public trees and update the tree inventory every seven years.***
 - a. Establish inventory of public trees.
 - b. Record all permits and completed maintenance work in the inventory.
 - c. Identify designated and potential heritage trees in the inventory.
 - d. Develop an urban tree canopy cover assessment using LIDAR remotely sensed data.

CE-J.1.1 Actions – Inventory and Inventory Update

1. Urban Forest Manager will prepare RFP for a complete inventory. This RFP shall require the identification of landmark trees and potential planting sites.
2. Urban Forest Manager will ensure that the new inventory is completed and accurate.
3. Urban Forest Manager will administer the inventory contract. The Streets and Open Space and Park divisions will require all contractors doing tree work in the city to update work records in the city’s tree inventory database. It should be clear in the contract that payment for services rendered will not be issued until work records and inventory update are completed.
4. The city will make available electronic tablets to employees to update the inventory.

5. Each employee will be required to complete work orders that update the current tree inventory each time a tree is planted, trimmed, removed, or serviced in anyway, such as hardscape repairs.
6. The Development Services department will update the inventory database when tree permits are issued.
7. Every seven years, Urban Forest Manager will request funding and/or seek grant opportunities to completely re-inventory the city.

2. ***Increase canopy cover (land area covered by trees) to optimize public benefits.***

- a. Obtain a canopy cover assessment using LIDAR remote sensing.
- b. Develop a citywide tree canopy optimum target consistent with the Climate Action Plan canopy cover goal.
- c. Establish canopy cover goals for each community.
- d. Develop a long-term tree-planting program for achieving established canopy goals.
- e. Plant trees that maximize public health benefits, carbon sequestration, air quality, energy reduction, water conservation, storm water retention, ground water recharge, wildlife habitat including those for urban birds, and other benefits.
- f. Encourage the planting of large canopy trees to maximize environmental benefits.
- g. Identify potential planting sites on public lands.
- h. Encourage the planting of trees on private properties.
- i. Reduce the urban heat island through actions such as planting trees and other vegetation to produce shade.
- j. Develop greening plans.

CE-J.1.2 Actions – Canopy Cover Assessment and Goals

1. Urban Forest Manager will work with canopy assessment experts to complete a LIDAR remote sensing canopy assessment of the entire city.
2. Planning Department together with Urban Forest Manager will work with each community to set canopy cover goals to be completed within 12 months of completing the canopy cover assessment.
3. Using the vacant planting sites as identified in the tree inventory, Urban Forest Manager will develop a 20-year planting plan to achieve the identified canopy cover goals using primarily large, broad-leaf, evergreen trees.
4. Urban Forest Manager together with the Streets and Open Space and Park divisions will begin to address the tree-planting goal in the Draft Climate Action Plan by annually increasing the tree population in areas identified as lacking in trees while the long-term plan is being developed.
5. The city's Streets and Open Space and Park divisions will begin planting trees using a combination of volunteers, city staff, and contract services.

6. Urban Forest Manager through the public outreach/educational program identified in CE-J.5 will encourage tree planting on private property.

3. ***Develop a master tree-planting plan that encourages optimal age and species diversity.***

- a. Plant a variety of species to create a more resilient urban forest.
- b. Plan for age diversity, pest susceptibility, and species diversity (no more than 10 percent of any one genus and no more than 2.5 percent of any one species within a genus).
- c. Review and update at least every five years, the city's approved Street Tree Selection Guide based on collaboration with and knowledge of local tree care professionals. Document reasons for removal/additions of a species from the list.
- d. Encourage where appropriate, the use of native, noninvasive, and water efficient species and collaborate with nursery owners on species selection.
- e. Incorporate trees and other green infrastructure as assets that are measurable in economic benefits.
- f. Include evergreen species to maximize stormwater retention.

CE-J.1.3 Actions – Diversity and Street Tree List

1. Urban Forest Manager through an analysis of the city's tree inventory will develop a master tree-planting plan that encourages an optimal level of age and species diversity and the use of native, noninvasive, and water-efficient species. The approved street tree list will be used for this master tree-planting plan.
2. Urban Forest Manager will develop and/or revise this master tree-planting plan in conjunction with the community plan updates that are scheduled and managed through the Planning Department.
3. Urban Forest Manager will review the community plans updated in the last five years to assess whether each urban forest element is consistent with this master tree-planting plan and recommend revisions.

4. ***Improve tree-planting success.***

- a. Review and revise tree planting specifications and guidelines and incorporate physical protections for young trees.
- b. Improve tree stock selection and purchase through qualified inspectors that follow city specifications and guidelines.
- c. Check and monitor planting sites for compliance.

CE-J.1.4 Actions – Planting Success

1. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will review and modify, if needed, specifications and guidelines for the purchase and selection of street tree stock for planting in the city public rights-of-way. These will be completed and sent to all department managers purchasing trees and nursery vendors providing city trees.

2. The Horticulturalist and Open Space and Park managers will begin spot-checking purchases for compliance beginning in 2016.
 3. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will review and modify, if needed, specifications and guidelines for the planting of street trees in the city public rights-of-way. This will be completed and sent to all department managers and contractors providing tree-planting services.
 4. The Horticulturalist and Open Space and Park managers will begin spot-checking newly planted trees for compliance beginning January 2016.
5. ***Improve care and maintenance of street trees through a comprehensive management program addressing newly planted trees, mature, and large trees.***
- a. Implement best management practices (BMPs) policy for all tree care activities and contract work, following International Society of Arboriculture (ISA) and American National Standards Institute (ANSI) standards.
 - b. Implement young tree maintenance program that includes tree protection, watering, structural pruning, stake removal, and six-month inspections for two years.
 - c. Prune trees on a regular schedule to maintain tree health, reduce risk of failure, provide clearance, and improve aesthetics.
 - d. Establish a maintenance program for mature and large trees, including regular inspections and minimal pruning.
 - e. Identify current and potential pests and diseases.
 - f. Ensure that tree care relating to insect and disease problems follow integrated pest management practices (IPM).
 - g. Develop management program for the preservation of heritage trees.
 - h. Ensure proper maintenance throughout the life of the tree.

CE-J.1.5 Actions – Implement BMPs

1. Urban Forester Manager together with the Horticulturalist and Open Space and Park managers will develop policies for the maintenance of all trees based on ISA and ANSI 300 standards. Staff and contractors will follow these approved BMPs in their daily activities.

CE-J.1.5 Actions – Implement Young Tree Care Program

2. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will develop a young tree maintenance program that includes watering, structural pruning, stake removal, and regular inspections.
3. The Streets Division will be responsible for watering the 2,500 trees planted in fiscal year 2015/16 and subsequent years, for the first three years.
4. A supplemental watering program using contract services is to commence at the same time as the tree-planting program begins.

5. Residents receiving trees will be given a guide to watering and general care at the time of planting.
6. Young trees require structural pruning twice within the first four years. The first pruning should take place when the tree is planted and the second pruning at four years of age.
7. A drive-by visual inspection is needed every six months for the first two years to identify and address any cultural needs.
8. Stakes and ties will be checked during these visual inspections and removed when the tree is strong enough to stand on its own.

CE-J.1.5 Actions – Implement Mature Tree Care Program

9. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will develop adult and mature tree care programs for each area of responsibility. The programs for parks, open space areas, and streets will be different because of location and management responsibilities.
10. Before this is completed, Streets Division staff will request funding and begin a program of trimming street trees based on a frequency of once every seven years starting in fiscal year 2015/16. The trees to be trimmed in this program will be prioritized by staff based on need.
11. After a detailed inventory of the City is completed and a master plan developed, a more balanced trimming program can be developed.

CE-J.1.5 Actions – Develop Heritage Tree Program

12. Urban Forest Manager will review and make changes to the Historic Tree Program to make it effective and relevant. Urban Forest Manager together with the Horticulturalist will evaluate all new trees identified in the inventory project (outlined in actions for objective CE-J.1.1) as potential candidates for the Heritage Tree Program.
13. Candidates identified for the heritage program will be combined with the current identified landmark, heritage, grove, and parkway resource trees.
14. Urban Forest Manager will guide revised program with the identified list of trees through the approval process.

6. *Improve care of public trees through a comprehensive water management program addressing newly planted trees, mature, and large trees.*

- a. Review current programs, practices, and procedures, including the City of San Diego's Water Implementation Task Force report, that address drought and the need to water trees to maximize environmental and social benefits of trees.
- b. Develop and implement a variety of programs that will ensure adequate water for all of San Diego's urban forest.

CE-J-6 Actions

1. The Horticulturalist and Open Space and Park managers will use a diverse watering program for newly planted trees that encourages property owners to water trees and makes uses of tree water bags and volunteer and contract services.

2. The Horticulturalist and Open Space and Park managers will identify water-stressed public trees and use identified methods to provide supplemental water to these trees.
 3. The Urban Forest Manager together with the Public Information Officer will develop and implement a public information strategy to encourage property owners to water drought-stressed mature trees.
7. ***Develop a tree removal and replacement program to address aging, diseased, poor-structured, and problem trees.***
- a. Use these removals to implement age and species diversity, and street tree master plans (in community plans).
 - b. Replace all dead or removed trees on a 2:1 basis.
- CE-J.1.6 Actions*
1. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will develop a 20-year tree removal and replacement program for each area of responsibility based on current inventory data and historical knowledge.
 2. Staff is to identify trees that have reached their live expectancy, trees that continue to cause infrastructure damage because they are the wrong trees for their locations, trees that are dying from known insects or diseases, trees that are poor street tree candidates because of structure or growth pattern, and invasive tree species.
 3. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will identify and prioritize the problem trees and areas.
 4. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will detail implementation of the program for each area and request budgets for removal and then replant two trees for everyone removed.
 5. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will implement their individual programs per duties with the Urban Forest Manager providing oversight and coordination if needed.
8. ***Identify funding sources for planting, care, maintenance, and protection of trees in the public rights-of-way, parks, and trees of significant importance.***
- a. Adequately fund the Streets Division as the primary maintenance provider of all trees in public rights-of-way.
 - b. Secure dedicated funding for tree planting, establishment and maintenance of all public trees.
 - c. Develop and implement a plan to capture all funding opportunities to meet these goals.
 - d. Investigate incentive opportunities for property owners to care for city trees.
 - e. Consider establishment of additional maintenance assessment districts.

CE-J.1.7 Actions

1. With the Urban Forest Manager taking the lead, Streets and Open Space and Park managers will strategize and develop funding sources and opportunities for generating revenue to cover the costs for the planting, care, and protection of the city's urban forest.
 2. Urban Forest Manager to establish annual revenue resource goals with the ultimate goal of providing sustainable funding for San Diego's urban forest. Funding sources may include additional maintenance assessment districts, capital improvement funds, and state grants.
9. ***Review, revise and/or write policies that address green and gray infrastructure conflicts.***
- a. Use emerging technologies in soil science and pavement engineering to reduce hardscape repairs and tree removals.
 - b. Develop a policy to minimize conflicts between tree roots and water and sewer lines.
 - c. Develop a policy to minimize impacts of tree roots on curbs, gutters, and sidewalks.
 - d. Develop a policy to minimize tree canopy conflicts with power lines.
 - e. Implement a tree root management program to address root conflicts.
- CE-J.1.8 Actions*
1. Urban Forest Manager to review and revise with each impacted department, practices and policies that address green infrastructure conflicts, i.e., water and sewer lines, overhead wires, curbs, gutters, and sidewalks.
 2. Urban Forest Manager to review the current sidewalk improvement project with the Street Division Managers to ensure that BMPs are followed to preserve and protect existing trees.
 3. Urban Forest Manager to work with all departments impacted by these potential conflicts to develop new policies and procedures where needed to ensure a strong and viable urban forest with minimal loss of trees due to these conflicts.
 4. Urban Forest Manager to take these revised policies for review and approval by all impacted city departments, appropriate boards and commissions, and the city council.
 5. The appropriate departments will submit new budget requests resulting from these new policies.
10. ***Ensure that tree care relating to insect and disease problems shall follow integrated pest management practices (IPM).***
- a. Identify current and potential pests and diseases.
 - b. Develop a program for addressing these based on IPM.
- CE-J.1.9 Actions*
1. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will identify current and potential pest and disease problems that have the potential to negatively impact San Diego's urban forest.

2. Urban Forest Manager will develop in conjunction with other departments an IPM program that will address current and future insect and disease problems in an environmentally responsible way.
3. Any additional budgetary requests to cover the cost of this program will be submitted by each impacted department.

11. *Develop a biomass reuse program for the city's green trimmings and removals.*

- a. Identify current biomass reuse programs in the city.
- b. Identify potential biomass reuse programs for the city.
- c. Develop a biomass reuse program based on the above information that focuses on highest and best use of the material.
- d. Require all city staff and contractors to follow the established program.

CE-J.1.10 Actions

1. Urban Forest Manager will identify and assess the current biomass reuse program and make recommended changes to focus on the highest and best use of the material.

CE-J.2. *Include community street tree master plans in community plans.*

- a. Prioritize community streets for tree planting.
- b. Identify the types of trees proposed for those priority streets by species (with acceptable alternatives) or by design form.
- c. Integrate known protected trees to glossary trees and inventory other trees that may be eligible to be designated as a protected tree.
- d. Review current urban greening plans that are in use.

CE-J.2 Objectives:

1. ***Review street tree plans and urban forest elements to optimize benefits to the community.***

Actions CE-J.2.1

1. Urban Forest Manager will review community specific street tree plans and urban forest elements as part of the Community Plan Update process to provide guidance to optimize tree benefits prior to Community Plan adoption.
2. Planning Department will include the need to update the urban forestry element as an important factor to consider when prioritizing Community Plan Updates.

2. ***Prioritize community areas for public tree planting programs.***

- a. Identify primary and secondary streets for developing and implementing the urban forest elements in the approved community master plans.
- b. Prioritize streets for tree planting based on need for improvement, number of vacant planting sites, existing species, and the condition of trees designated in the approved community plan.

- c. Incorporate trees for noise attenuation in street plans.
- d. Identify and plant trees that complement and expand on the surrounding street trees.
- e. Unify communities by using street trees to link residential areas.
- f. Integrate street trees when planning and retrofitting roadways consistent with complete streets concepts.

Actions CE-J.2.2

- 1. Urban Forest Manager and Planning staff are to base prioritization on need for improvement, number of vacant planting sites, existing species, tree condition and species of trees designated in the approved Community Plan. Include these priorities in CE-J-1.5.
 - 2. In addition to priorities established in the Community Plan process, Urban Forest Manager will work with the Horticulturalist and Open Space and Park managers to prioritize streets for urban forestry improvements. Twenty percent of the streets are to be completed each year beginning in 2016/17.
 - 3. Urban Forest Manager together with the Horticulturalist and Open Space and Park managers will use these established priorities to implement the city's tree planting program.
3. ***Integrate known protected trees and inventory other trees that might be eligible to be designated as a protected tree in each community.***

Actions CE-J.2.3

- 1. Urban Forest Manager and Planning Department staff will integrate known protected trees and inventory other trees that might be eligible to be designated as a protected tree in each community as outlined in CE-J-1.1 and CE-J-2.1.

CE-J.3. Develop a citywide urban forest master tree-planting plan comprised of the community plan street tree master plans.

CE-J.3. Objectives:

- 1. ***Develop the Urban Forest Master Plan.***

Actions CE-J.3.1

- 1. Urban Forest Manager, while developing the urban forest element in each community plan, will formulate a master tree-planting plan based on the tree species chosen by each community.
- 2. This master tree-planting plan will be completed and approved as part of the process identified in CE-J.2.1.
- 3. Urban Forest Manager will also develop a master tree-planting plan for those communities without an urban forest element as outlined in CE-J.2.2.

- 2. ***Review plan and update as needed.***

Actions CE-J.3.2

1. Urban Forest Manager will review the urban forest master tree-planting plan and update as necessary.

CE-J.4. Continue to require the planting of trees through the development permit process.

- a. Consider tree planting as mitigation for air pollution, stormwater runoff, and other environmental impacts as appropriate.

CE-J.4. Objectives:

1. ***Develop policies that encourage and incentivize developers, homeowners associations, and other organizations to adopt trees as green infrastructure assets.***

- a. Develop policies for tree preservation during construction.
- b. Encourage developers to incorporate existing trees and vegetation into building and site designs when redeveloping sites.

Actions CE-J.4.1

1. Urban Forest Manager together with city planners will review the current development policies and process to ensure that maximum benefit from street tree planting is reached.
2. If the process needs revision or improvement, Urban Forest Manager and city staff will begin a process of revising the policies and procedures for implementing the city's urban forest element into the development process.

2. ***Increase enforcement of the city's policies and regulations related to the urban forest and consider implementing fines.***

Actions CE-J.4.2

1. Urban Forest Manager together with Planning staff and Code Enforcement will develop an improved enforcement program that may include fines.

3. ***Re-assess No Fee Permit Process for planting, trimming, removing, and replacing trees in public rights-of-way.***

Actions CE-J.4.3

1. Planning staff and Code Enforcement to review and rewrite the No Fee Permit Process as needed.

4. ***Comply with the Draft Climate Action Plan and use trees to shade paved areas, especially parking lots; and use trees and other landscaping to provide shade, screening, and filtering of storm water runoff in parking lots.***

Actions CE-J.4.4

1. Planning staff together with the Urban Forest Manager will review policies to ensure compliance with the Draft Climate Action Plan that requires an increase in tree canopy.

2. Planning staff together with the Urban Forest Manager will comply with the Draft Climate Action Plan, request budgets, and implement tree plantings, tree care, and other programs.

5. Implement programs that use tree planting, bio-swales, permeable pavement, and other green infrastructure activities to reduce stormwater runoff.

Actions CE-J-4.5

1. The Urban Forest Manager together with the Storm Water Division will investigate ways of using trees and other green infrastructure activities to reduce storm water runoff.

CE-J.5. Support outreach efforts to educate city staff, the business community, and the public on the environmental and economic benefits of trees.

CE-J.5. Objectives:

1. ***Partner with non-profits, academic institutions, and other community organizations.***
 - a. Develop programs that involve student/youth groups in the planting, care, and protection of trees.
 - b. Develop a program to provide training to landscape/design committees for homeowners associations and other community groups.

Actions CE-J.5.1

1. Urban Forest Manager together with the Streets Division and Open Space and Park managers will identify potential non-profit and other community organizations for partnerships that would enhance the city's urban forest.
 2. Urban Forest Manager and appropriate staff members will engage potential partners to discuss mutual interests and working relationships.
 3. Urban Forest Manager together with other city staff members will develop a program that provides opportunities for partnerships.
 4. Urban Forest Manager together with other city staff members will hold a partnership kick-off event in conjunction with "Make a Difference Day" in October 2017.
2. ***Establish a community education outreach program and develop materials to increase public awareness about the value of trees and their benefits to public health and well-being.***
 - a. Educate the public on street tree selection, proper tree care, watering, pruning, and pests and diseases.
 - b. Make property owners aware of their responsibility regarding street trees.
 - c. Identify potential economic benefits from planting trees and share this information with elected officials and business and community leaders.

- d. Assess current and future educational outreach programs that promote the benefits of the urban forest.

Actions CE-J.5.2

1. Urban Forest Manager together with the city Public Information Officer will assess the current educational outreach programs to determine their effectiveness.
2. Urban Forest Manager together with the city Public Information Officer will develop new educational outreach programs that promote the benefits of trees.
3. Urban Forest Manager will compile a cost/benefit analysis using cutting-edge metrics of the city's urban forest.
4. Urban Forest Manager will identify the public health benefits derived from the city's urban forest.

3. ***Incorporate tree watering guidelines and information about water conservation to retain healthy urban trees on public and private properties.***

Actions CE-J.5.3

1. Urban Forest Manager together with the Public Information Officer will develop tree watering and conservation guidelines as part of their educational outreach program as outlined in CE-J.5.2.

For further information, contact Melissa Garcia, Senior Planner,
magarcia@saniego.gov, 619.236.6173.