



MEMORANDUM

Community Services Department

DATE: February 10, 2021

TO: Parks and Recreation Commission and Urban Forestry Board

FROM: Jakob Trconic, Forestry and Roadway Manager
John R. Marchant, Community Services Director

SUBJECT: Update to Community Tree Master Plan

RECOMMENDATION

Review the elements and deliverables identified to complete the five-year update to the 2015 Community Tree Master Plan and provide feedback to the consultant team and City staff.

BACKGROUND

The City's tree canopy is a valuable asset to the Mountain View community. Trees strengthen communities and provide social, psychological, and aesthetic benefits. The contributions trees make to the environment are often referred to as ecosystem services. Science shows that these services are tangible and numerous. Trees improve air and water quality, reduce home energy use, increase property values, and provide habitat for urban wildlife.

On September 15, 2015, the City Council adopted the current 2015 Community Tree Master Plan (2015 Plan). Through this process, the Council reaffirmed the importance of tree canopy to the community and the desire to encourage future growth of the canopy within the City. The 2015 Plan was designed to cover a 15-year period with updates every five years in order to review established goals and new data. The Community Services Department staff has executed a contract with the same consultant that created the 2015 Plan to ensure established data points would be consistent between the 2015 Plan and the five-year updated version. Davey Resource Group (DRG) is prepared to start the five-year update process.

Both City staff and DRG have agreed to complete specific elements in order to provide the community with a robust five-year update to the Community Tree Master Plan. The Parks and Recreation Commission is being asked to review the identified elements and

process to update the 2015 Plan and provide input as staff and the consultant prepare for the next steps.

ANALYSIS

DRG is preparing to begin the process to update the 2015 Plan. This includes reviewing the benchmarks and goals created in the 2105 Plan and updating specific data points to tell a story of how the canopy has changed over time. Based on the analysis of the new data, the updated Plan will include recommendations for a revised goal for canopy coverage as well as other canopy goals and recommended steps to reach those goals.

Through this process, DRG will explore patterns and trends for the City to consider for addressing strategic tree plantings, equality, justice, and other issues related to planning and creating a welcoming City. Through the update of the 2015 Plan, an assessment of five primary land-cover classes will be completed, including canopy, impervious surface, bare soil, open water, and low-lying vegetation to analyze current conditions compared to historical imagery.

To complete the base services within the agreement, DRG will provide several services to update the 2015 Plan. The following are identified base services.

Tree Canopy Mapping with Land Cover Metrics

By analyzing current and older LiDAR and GIS data layers, DRG will complete a “Tree Canopy Assessment” to identify the current extent of the canopy as well as targeted species of trees for further in-depth mapping. DRG will provide a spreadsheet of the percent canopy cover data for specific geographies, land use, neighborhoods, and watershed. The data can be used to provide specific data according to:

- Tree canopy cover of the City;
- Tree canopy cover by census tracts and block groups;
- Tree canopy cover by parcel; and
- Tree canopy cover by zoning or land use.

Tree Canopy Change Assessment

This assessment will identify points of canopy growth and loss. The analysis will include spatial change, acreage change, percent changes, and more.

In addition to a comprehensive update of the 2015 Plan utilizing the methods provided above, DRG and City staff have agreed to implement additional services to create more data points to further educate staff and the public, as well as guide future policy changes.

The following is a list of additional services DRG has agreed to complete through the 2015 Plan update process:

1. Complete 2014-15 Impervious Baseline

The 2015 Plan used i-Tree Canopy and current Google imagery to estimate the overall percentage of land-cover classes, including tree canopy, pervious surface, impervious surface, and open water. Understanding the extent of other land-cover classifications can help determine canopy cover potential and develop reasonable goals for canopy cover.

2. Ecosystem Benefits (Citywide)

Analysis of the amount of pollution removed by trees. Evaluates the carbon sequestration and storage provided by the Canopy. Analysis of pollutant runoff. Quantifies the value of ecosystem services for stormwater runoff.

3. Priority Planting Plan

Prioritize target planting areas to reduce heat islands, reduce flooding, mitigate stormwater and maximize ecosystem services, and consider equal access to all citizens.

4. i-Tree Hydro Stormwater Pollution Assessment

Identifies the amount of pollutants generated in stormwater runoff and identify the amount pollutants captured and filtered by trees.

5. Relative Tree Canopy Health Assessment

Measure and assess ecosystem dynamics and vegetation health.

6. Socioeconomic and Demographic Analysis

Canopy data assessed on the City-level, planning areas, and census tracts.

7. Urban Heat Island Mapping

Analyzes changes in vegetation and its impacts.

8. TreeKeeper Canopy

TreeKeeper Canopy is a unique, user-friendly web tool that streamlines viewing tree canopy assessment results. The tool will enable the City to prioritize new planting locations, project and estimate future tree canopy benefits, and budget for tree planting costs.

9. StoryMap

An effective visual presentation of Mountain View's CTMP Update that can showcase areas of the City. StoryMap is put together through a fusion of text, data, and images to detail project findings. It is an interactive tool that will display Mountain View's urban forest features, benefits, and value to the public.

City staff and DRG believe that the scope of services included in the agreement will provide an enhanced product compared to the 2015 Plan by adding additional computer modeling and analysis that will provide data to support future recommended goals to improve the Canopy within the City.

ADDITIONAL WORK OUTSIDE OF 2015 PLAN UPDATE

The Community Tree Master Plan emphasized the contribution of volunteers and nonprofit groups to a successful urban forestry program. Over the last year, staff engaged with a nonprofit called Canopy. An agreement has been completed with Canopy and, as part of this agreement, Canopy has agreed to create a Tree Technical Manual for the City of Mountain View that is similar to Palo Alto's Manual but incorporating Mountain View codes and regulations. The goal of the manual is to establish specific technical regulations, standards, and specifications necessary to implement the ordinance and to achieve the City's tree preservation goals. These goals are intended to provide consistent care and serve as benchmark indicators to measure achievement in the following areas:

- Ensure and promote preservation of the existing tree canopy cover within the City limits;
- Provide standards of maintenance required for protected and City-owned trees;

- Provide a standardized content for tree reports required by the City;
- Establish criteria for determining when a tree is unsafe and a possible threat to the public health, safety, and welfare;
- Provide standards for the replacement of trees that are permitted to be removed; and
- Increase the survivability of trees during and after construction events by providing protection standards and best management practices.

FISCAL IMPACT

The total contract amount for DRG to complete all base services and agreed-upon additional services totals \$60,000. Funding in the amount of \$45,000 was budgeted from the Sustainability Action Plan 4 (SAP-4) and \$15,000 was budgeted from the Tree Mitigation Fund.

NEXT STEPS

Based on input from the PRC, City staff and DRG will begin to solidify a project timeline which identifies project milestones and outcomes. The timeline will include opportunities for input from the City (staff, advisory bodies, and City Council), stakeholders, and the public.

JT-JRM/AF/1/CSD
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