RESOLUTION NO. 04-21

A RESOLUTION APPROVING THE CITY OF COLORADO SPRINGS URBAN FOREST MANAGEMENT PLAN

WHEREAS, community stakeholders, citizens, City staff, City volunteer boards and commissions, and the City's consultants have engaged in an iterative, inclusive, transparent and collaborative planning process which has resulted in the "Urban Forest Management Plan" (the "Plan"); and

WHEREAS, the City of Colorado Springs' current forest management plan is dated and lacking in the new Plan's level of research and analytics; and

WHEREAS, the Plan is a direct result of recommendations called out in the City's Urban Forest Canopy Analysis completed in 2018; and

WHEREAS, the Plan provides numerous, prioritized goals and strategies through four potential management scenarios focused on improving the health of the City's urban forest; and

WHEREAS, City staff will strive to identify funding sources for the Plan's implementation.

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLORADO SPRINGS:

Section 1. City Council approves the Plan to serve as the City of Colorado Springs Urban Forest Management Plan.

Section 2. City Council supports the utilization of the Plan to improve maintenance and management of the community's urban forest.

Section 3. City Council recommends that the Plan be used as an informational resource for anyone interested in the urban forest.

Section 4. This resolution shall be effective upon its approval by City Council.

Dated at Colorado Springs, Colorado, this 12th day of January 2021.

Council President

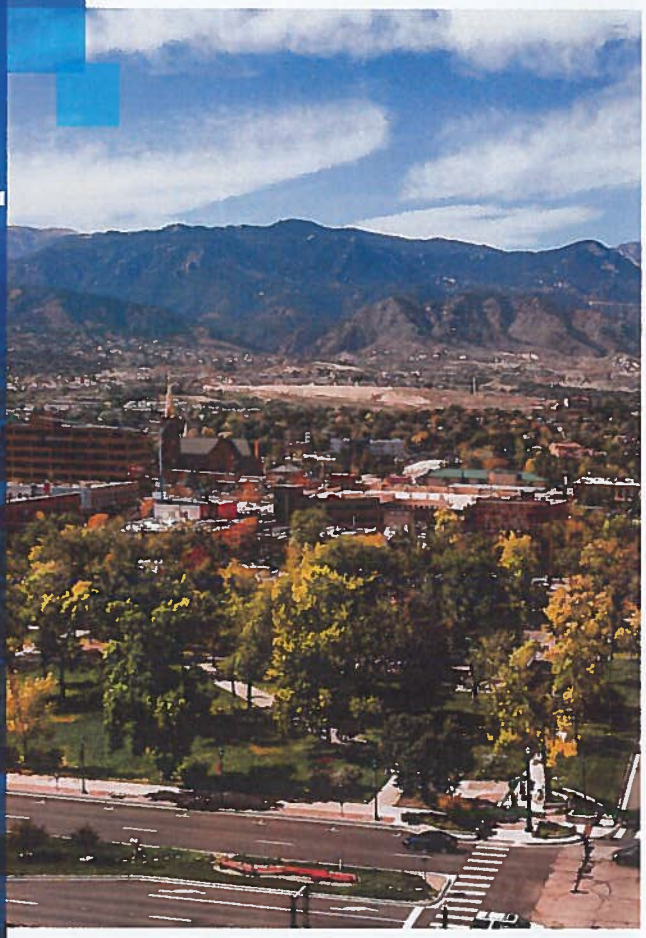
ATTEST:

Sarah B. Johnson, City Clerk

COLORADO SPRINGS INCORPORATED SEAL SEPTEMBER 3, 1872 COLORADO

URBAN FOREST

MANAGEMENT PLAN



COLORADO SPRINGS, COLORADO

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URBAN FOREST

MANAGEMENT PLAN

PHASE 2 PRIMARY FRAMEWORK

COLORADO SPRINGS, COLORADO

ACKNOWLEDGMENTS

Funding for this effort supported by the City of Colorado Springs Parks, Recreation and Cultural Services Department.

- The City of Colorado Springs Contributions -

Colorado Springs Forestry Division
City Council
City of Colorado Springs Supporting Departments
Colorado Springs Utilities
Residents of Colorado Springs

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A VISION FOR COLORADO SPRINGS'

URBAN FOREST

"Our City's trees, forests, and other natural resources are recognized as integral to sustaining life and health for all City residents. A healthy, thriving, and sustainable urban forest is a community priority, to be thoughtfully managed and cared for by partnerships between the City and its residents to maximize public safety and benefits that include a thriving ecosystem, vibrant economy, and livable communities shared by all who live, work, and play in Colorado Springs."

PLAN

APPENDICES

**Disclaimer: Appendices IV and V regarding code and rules & regulations have not been formally adopted by City Council pending revision and have been removed from this version of the Urban Forest Management Plan.*

LIST OF FIGURES

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CITY FORESTRY'S MISSION

To manage our urban forest in a healthy, safe, and sustainable state, which maintains our original forest legacy, manages risk, and increases the canopy coverage for shade, stormwater retention, and property value.

A VISION FOR COLORADO SPRINGS' URBAN FOREST

Our City's trees, forests, and other natural resources are recognized as integral to sustaining life and health for all City residents. A healthy, thriving, and sustainable urban forest is a community priority, to be thoughtfully managed and cared for by partnerships between the City and its residents to maximize public safety and benefits that include a thriving ecosystem, vibrant economy, and livable communities shared by all who live, work, and play in Colorado Springs

The purpose of this Urban Forest Management Plan is to achieve this vision and to implement the Forestry Mission Statement by addressing best management practices toward sustainability of the City's urban forest. This plan should follow the recommended strategies and policies outlined in the City's Comprehensive Plan and as summarized in the Urban Forest Management Plan's Research Summary.

The overriding goals of the Urban Forest Management Plan and the Division of Forestry focus on preserving, maintaining, and managing the urban forest to ultimately benefit the residents of Colorado Springs. This plan outlines recommendations, projections, and procedures to achieve these goals for various management scenarios depending on resources.

URBAN FOREST MANAGEMENT PLAN GOALS

I. Tree Policies: *Strengthen the foundation for sustainable urban forest management.*

II. Staffing: *Improve staffing levels for a healthy urban forest benefiting all citizens.*

III. Budget and Funding: *Secure adequate funding for proactive management.*

IV. Assessments and Plans: *Understand trends and risks to the urban forest.*

V. Green Asset Management: *Provide efficient management of the resource.*

VI. Community Engagement: *Develop community-wide urban forestry support.*

As the City continues to grow exponentially, the demand-loads on Forestry are untenable. According to research, to properly manage an urban forest, each tree should be pruned approximately every seven years. Colorado Springs has an estimated public tree population of 270,000 trees. This means approximately 38,600 trees per year should have maintenance performed on them. In recent years, City staff have been able to maintain less than 1,700 trees per year with current staffing, and another 2,000 with contracted services. Additional staffing is critical in order to increase the care provided to the growing urban forest. In addition to under-staffing there are budget shortcomings compared to the needs of the public trees and industry standards. A common budget comparison and measure is to look at the proportion of staff to public trees as well as the budget distributed across the public tree population. The results of this comparison are provided in Table 1 on the next page.

CALL TO ACTION

Trees are an integral part of the community and the ecological systems in which they exist. They provide significant economic, social, and ecological benefits, such as carbon sequestration, reduction of the urban heat island effect, energy savings, reduction of stormwater runoff, improvement of water quality, provide healing and calming qualities, and increase the value of business and residential properties. Planting and maintaining trees help Colorado Springs become more sustainable and reduce the negative impacts on the ecosystem from urban development. Trees are as necessary as water, infrastructure, and energy to sustaining healthy communities.

Implementation of the strategic actions by management scenario in this Plan will achieve the urban forestry goals and associated co-benefits desired by the City and its residents to the extent possible with available resources. To be successful, plan implementation is heavily dependent upon engagement between the City and its residents. Each management scenario contains goals, objectives, targets, and actions to improve urban forest sustainability, management, and equity. The framework of this strategic plan allows the City to take actions that build on previous work, effectively monitor progress, and efficiently adapt in an everchanging environment.

It is City Forestry's responsibility to facilitate the implementation of the Urban Forest Management Plan based on the status of resources and funding. Actions provided in each management scenario are prioritized based on resources needed, level of effort, co-benefits achieved, and implementation year(s) to propel the urban forestry program towards improved management. Successful implementation of one of the improved management scenarios in the Plan will bring Colorado Springs' trees and forests to a higher level of service that is more equitably distributed across the City to benefit present and future generations.

Photo courtesy of the City of Colorado Springs.

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PLAN FRAMEWORK

The optimal approach to managing an urban forest is to develop an organized, proactive program using information to set goals and measure progress. This information can be utilized to establish priorities, plan strategically, draft cost-effective budgets, and ultimately minimize the need for costly, reactive solutions to crises or urgent risk mitigation. Based on the results of the **Phase 1 Research Summary**, incremental steps to achieve these improvements were developed that can be applied as the City continues to progress. The following outline provides the framework of the Plan:

- Four urban forest management scenarios: were developed:
    A. Implement the actions for **Management Scenario A, Baseline Conditions** to build the case for the alternative scenarios.
    B. Secure additional funding and continue to implement actions for **Management Scenario B, Additional but Insufficient Funding**.
    C. Implementation of Management Scenario A sets the stage for **Management Scenario C, Tree Maintenance Responsibility Transfer**.
    D. Actions in Management Scenario A, B, or C provide the information for pursuing **Management Scenario D, Optimal Support**.

Disclaimer: Management scenarios A-D were created as alternatives for consideration; no alternative is favored or recommended over another and other feasible scenarios may arise in the future.

- The scenarios and framework of this Plan follow a 20-year planning horizon.
- An overview, recommendations, limitations, opportunities, and service levels for each scenario are provided.
- Goals, targets, and actions to be implemented for each management scenario are provided. Targets are established to measure progress as the City's resources and funding change.
- Actions are ranked by priority and level of effort with an assignment of implementation lead and target year for completion.
- Case studies and research to support progression towards improved management.

SCENARIOS AND LEVELS OF SERVICE

Many city agencies, particularly public works agencies, are familiar with using the "level of service" concept when determining annual budgets. Based on the characteristics of the infrastructure components, mandated and desired services, and other department responsibilities, budget decisions are often made on levels of service delivery. The focus of these budget determinations is on getting results rather than determining a single, fixed budget level. In this Plan, the management scenarios describe the urban forestry goals and objectives that can be achieved based on various levels of service and budgets. Multiple budget scenarios can be expressed as the funding amount necessary to provide minimum to adequate to high levels of urban forestry services. This can also be expressed as reactive, routine, and proactive management.

- The minimum service level, or reactive management (**Management Scenario A**) is characterized by responding only to emergencies and high priority complaints. At this level, known safety risks are addressed and the financial demands are the lowest, but it is the least efficient means of service delivery in the long run, generates low citizen satisfaction, does not comprehensively address risks, and is usually a result of the lack of a coherently developed urban forestry program.
- An improved service level, or varied management approach (**Management Scenario B**), addresses emergency and request-driven work, but also has resources to begin routine tree maintenance and scheduled planting programs.
- A high service level, or proactive management (**Management Scenario C or D**), provides for frequent preventive tree maintenance cycles, a high level of tree planting, comprehensive emergency response and clean-up services, pest and disease treatment programs, and public outreach and education. This level has the highest annual costs but generally results in safer, more sustainable urban forests with less storm damage potential and insect and disease threats, maximum tree benefits, and the greatest level of citizen satisfaction.

Once the appropriate level of funding is determined based on the needs of the urban forest and the level of service the community desires, the source or combination of sources for that funding can vary. This Plan provides the framework to build the case for enhanced funding and approaches to secure a diverse and sustainable funding portfolio to achieve the desired levels of service.

- **Recommended Actions**

  A summary of the actions to implement within the confines of the management scenario.

- **Limitations**

  The consequences of the management approach within the scenario.

- **Levels of Service**

  The allocation of resources within the management scenario described as follows:

  Service Level 1) The minimum service level, or reactive management;

  Service Level 2) An adequate service level, or routine management;

  Service Level 3) A high service level, or proactive management.

  A detailed description of levels of service is provided in the Plan Framework section.

- **Timeline**

  Timeframe for implementing the actions in this Plan.

URBAN FOREST MANAGEMENT PLAN GOAL FRAMEWORK

Table 3. Summary of the six goals that guided the objectives, targets, actions, and timelines in the Plan.

I. TREE POLICIES: *Strengthen the foundation for sustainable urban forest management.*

A	Code Language	TARGETS ACTIONS
B	Code Enforcement	
C	Define Code Standards	
D	General Policy	

II. STAFFING: *Improve staffing levels for a healthy urban forest benefiting all citizens.*

A	Levels of Service	TARGETS ACTIONS
B	Defining Authority	
C	Communications	
D	Workflows	
E	Training	

III. BUDGET AND FUNDING: *Secure adequate funding for proactive management.*

A	Assessment	TARGETS ACTIONS
B	Budget Planning	
C	Funding	

IV. ASSESSMENTS AND PLANS: *Understand trends and risks to the urban forest.*

A	Tree Inventory	TARGETS ACTIONS
B	Canopy Assessment	
C	Plans	

V. GREEN ASSET MANAGEMENT: *Provide efficient management of the resource.*

A	Tree Tracking	TARGETS ACTIONS
B	Tree Maintenance Prioritization	
C	Tree Maintenance Regime	
D	Storm Response	
E	Biomass Utilization	
F	Wildland-Urban Interface	
G	Young Tree Pruning	
H	Integrated Pest Management	
I	Tree Maintenance Specifications and Standards	
J	Tree Watering	
K	Tree Planting	

VI. COMMUNITY ENGAGEMENT: *Develop community-wide urban forestry support.*

A	Education and Outreach	TARGETS ACTIONS
B	Partnerships	
C	Volunteers	

MANAGEMENT SCENARIO A OVERVIEW

This management scenario provides guidance for City Forestry to continue operations and services under baseline conditions with no changes to resources. It uses the planning elements from the Phase 1 Research Summary to provide a strategic road map for efficient management based on available resources to achieve interim goals of urban forest management, sustainability, and equity. The recommendations implemented with this approach strengthen or build the foundation from which the urban forest management program can grow with future additional funding and support.

RECOMMENDED ACTIONS

Based on the available resources and the research conducted as part of the Urban Forest Management Plan project, the following overview of recommendations for urban forest management under baseline conditions ("business as usual") are provided. The complete set of actions for Management Scenario A begin on page 18.

Table 4. Summary of recommended actions under baseline conditions in Management Scenario A.

I. Tree Policies

- (I.A-D): Strengthen City Code as it relates to urban forestry.

II. Staffing

- (II.A): Evaluate staff and resource needs for a public tree population of over 270,000 trees. It is estimated that of the total public tree population, there are approximately 250,000 public street trees and 20,000 public park trees.
- (II.B): Establish or clarify tree maintenance authority and responsibility.
- (II.C-E): Create or update communication processes, Standard Operating Procedures, and training opportunities.

III. Budget and Funding

- (III.A-B): Develop business cases for additional budget and resources.
- (III.C): Establish dedicated funding sources summarized in a sustained funding report.

IV. Assessments and Plans

- (IV.A-B): Update, manage, and utilize available public tree data.
- (IV.C): Develop supporting, localized urban forestry plans and update the Citywide plan.

V. Green Asset Management

- (V.A): Manage tree inventory data connected to the service request system and other City asset management programs.
- (V.B-C): Maintain the current tree maintenance regime by responding to citizen service requests, completing preventative pruning for 4,000 trees in prioritized areas using in-house and contracted services annually, and removing 400 City-owned hazardous trees annually.
- (V.C): Evaluate costs and benefits of a phased relinquishment of public street tree maintenance responsibility.
- (V.D-K): Evaluate and update procedures for storm preparation and response, biomass utilization, wildland-urban interface management, young tree pruning, integrated pest management, implementing standards and best practices, tree irrigation, and planting.

VI. Community Engagement

- (VI.A): Provide education to the public on urban forestry topics such as ecosystem benefits, tree maintenance authority, outcomes from this Plan, tree planting and care, and pest monitoring through various approaches such as the City website, social media, fliers, surveys, workshops, and trainings.
- (VI.B): Strengthen the community partner network with conventional and non-conventional partnerships that represent demographics and regions across the City.
- (VI.C): Amplify community volunteerism efforts through education and events such as the Arbor Day Foundation Tree City USA awards tree planting celebration and awards for exemplary urban forest stewardship.

FRAMEWORK OF PLAN TARGETS

The following tables provide planning targets consisting of desired conditions, metrics, and indicators to allow stakeholders to track progress in achieving the associated goal. Implementation of the actions provided in this Plan will lead to successful achievement of the listed targets. The targets are listed in incremental stages across a 20-year planning horizon; 1-year, 2-year, 5-year, 10-year, 20-year— indicating the timeframe for accomplishing the relative target. Each target includes a reference to the Plan action(s) that will support achievement of the target. The following depicts the layout of the Plan Targets:

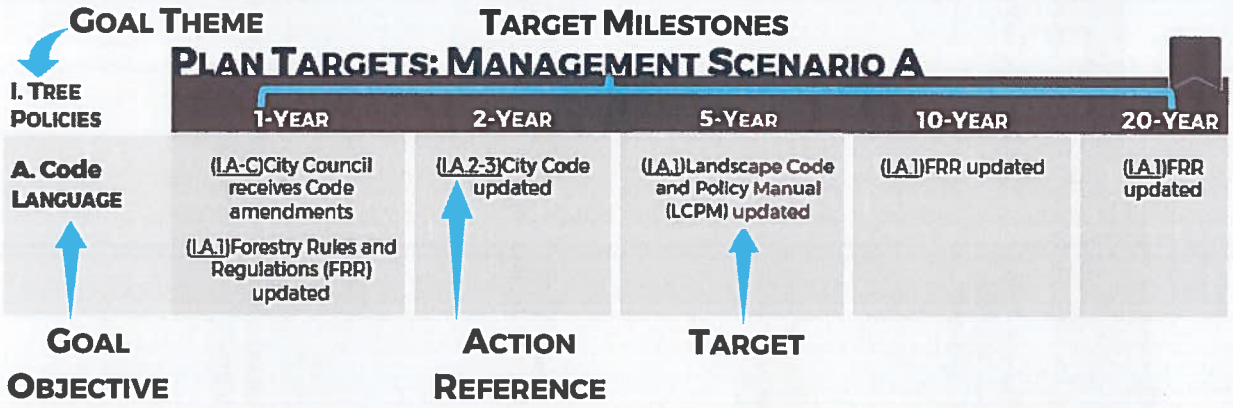

Figure 1. An example of the Targets tables found in this Plan including the goal theme, goal objective, action reference, targets, and target milestones.

Each target includes a reference to the action(s) that supports its accomplishment. For example, to update City Code within the 2-year target milestone, actions I.A.2 and I.A.3 need to be implemented as shown in the table excerpt below. As the table shows, each action in Management Scenario A's action table includes an action number. This number is referenced in parentheses within each target.

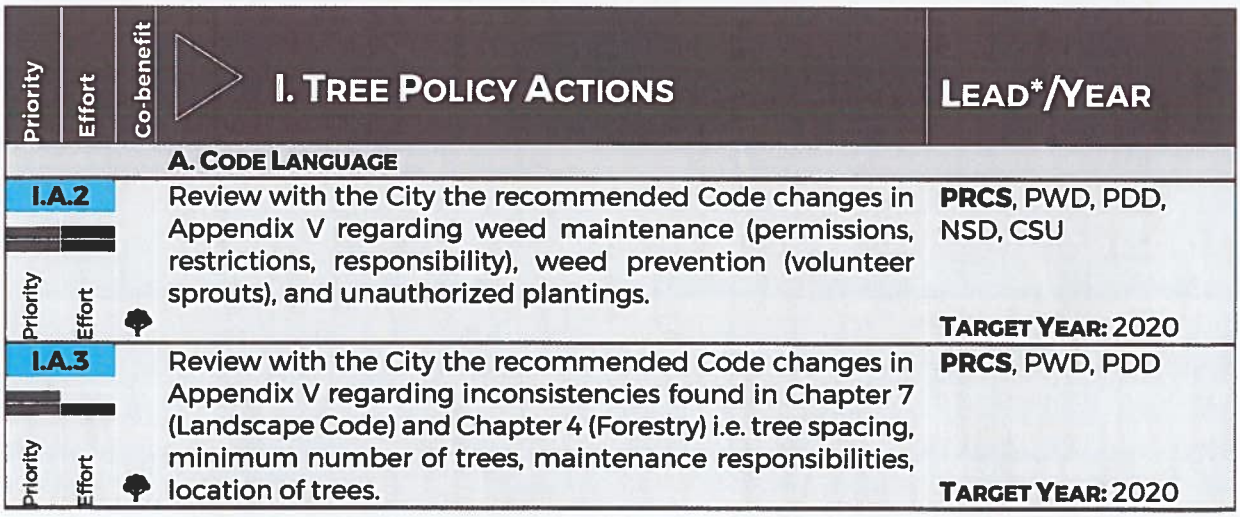

Figure 2. An example of the Actions tables found in this Plan including the goal theme and objective, priority and effort rankings, co-benefits, lead, and target year.

Table 5. continued: Complete list of targets, by goal, for Management Scenario A.

PLAN TARGETS: MANAGEMENT SCENARIO A					
II. STAFFING	1-YEAR	2-YEAR	5-YEAR	10-YEAR	20-YEAR
A. LEVELS OF SERVICE	(II.A.1)Tree maintenance staffing business case	(II.A.1)Additional staffing business case prepared (II.A.2-3) Standard Operating Procedures (SOP) for contractors	(II.A.1)Business case for 4 Forestry divisions		
B. DEFINING AUTHORITY	(II.B.4)Maintenance authority for trees listed in FRR		(II.B.4)Tree maintenance authority updated in FRR		(II.B.4)Tree maintenance authority updated in FRR
C. COMMUNI-CATIONS	(II.C.1)Business license SOP with City Clerk's Office	(II.C.4)Storm response SOP			
D. WORKFLOWS			(II.D.1)SOPs updated (II.D.2)Staff hours per activity within +/- 5% of job description		
E. TRAINING	(II.E.1)One-third of all current certified staff acquire necessary CEU's to maintain certification (II.E.2)At least 1 safety or industry training is held per quarter		(II.E.1)All Forestry staff are International Society of Arboriculture (ISA) Certified Arborists, 1 TRAQ Qualified, 3 Municipal Specialists, 2 Society of American Foresters (SAF) Certified Foresters (II.E.2)2 annual City department urban forestry trainings	(II.E.1)2 ISA Board Certified Master Arborists, 2 SAF Certified Foresters	

Table 5. continued: Complete list of targets, by goal, for Management Scenario A.

PLAN TARGETS: MANAGEMENT SCENARIO A

IV. ASSESSMENTS AND PLANS	1-Year	2-Year	5-Year	10-Year	20-Year
A. TREE INVENTORY	(IV.A.1)50% of public trees inventoried	(IV.A.1)100% of public trees inventoried (IV.A.1)All tree activities tracked in software (IV.A.2)Cost-benefit analysis completed for trees	(IV.A.3)City and partner tree plantings tracked in software (IV.A.4)Risk assessment program implemented	(IV.A.1)Second phase public tree inventory	(IV.A.1)Entire public tree inventory completed
B. CANOPY ASSESSMENT				(IV.B.1)Canopy change assessment to establish canopy goals	
C. PLANS		(IV.C.2)UFMP is updated	(IV.C.2)UFMP is updated (IV.C.3)Technical and educational support results in 2 academic institution UFMPs (IV.C.3)Technical support results in HOA, SIMD, or neighborhood UFMP	(IV.C.2)UFMP is updated (IV.C.3)10% of academic institutions have a UFMP (IV.C.4)An urban forest audit is completed	(IV.C.2)UFMP is updated (IV.C.3)25% of academic institutions have a UFMP (IV.C.3)2 corporations, 25% of healthcare facilities have a UFMP (IV.C.3)25% of HOAs, SIMDs, neighborhoods have a UFMP (IV.C.4)An urban forest audit is completed

Table 5. continued: Complete list of targets, by goal, for Management Scenario A.

PLAN TARGETS: MANAGEMENT SCENARIO A

	1-Year	2-Year	5-Year	10-Year	20-Year
V. GREEN ASSET MANAGEMENT					
E. BIOMASS UTILIZATION	(V.E.1)City wood debris used for playgrounds and other areas up 10%	(V.E.1)City wood debris used for playgrounds and other areas up 25%	(V.E.1)City wood debris used for playgrounds and other areas up 50%	(V.E.1)City wood debris used for playgrounds and other areas up 75%	(V.E.1) Repurposing City wood debris program for firewood, lumber, furniture
F. WILDLAND-URBAN INTERFACE (WUI)			(V.F.2)5% of fire risk acres in WUI areas maintained		
G. YOUNG TREE PRUNING	(V.G.1)Young tree care plan for City-led projects	(V.G.1)City Code and FRR updated with young tree care standards		(V.G.1)Young public tree maintenance plan	
H. INTEGRATED PEST MANAGEMENT	(V.H.2)Response to ash tree service requests follows a consistent management approach	(V.H.2)Emerald ash borer plan implemented (V.H.3)Tree susceptibility report		(V.H.2)Partial completion of emerald ash borer plan actions	
I. TREE SPECS AND STANDARDS	← (V.I.1)City tree maintenance adheres to standards and best practices →				
J. TREE WATERING		(V.J.2)Planting and watering plan	(V.J.5)Modified water plan for trees in drought	(V.J.4)75% of trees planted are site appropriate	(V.J.4)Updated tree species list and planting plan

Table 5. continued: Complete list of targets, by goal, for Management Scenario A.

PLAN TARGETS: MANAGEMENT SCENARIO A

VI. COMMUNITY ENGAGEMENT	1-Year	2-Year	5-Year	10-Year	20-Year
A. EDUCATION AND OUTREACH	(VI.A.1-16)Public outreach strategy developed (VI.A.6)Forestry articles (1 per quarter) on social media, other platforms	(VI.A.8)Forestry public survey (biannually)	(VI.A.9-15)6 topic-specific messages created for 4 audiences (residential, businesses, institutions, youth)	(VI.A.16)Trained tree stewards representing multiple neighborhoods	(VI.A.1-16)City tree organizations host multiple events, trainings
B. PARTNERSHIPS	(VI.B.1)UFMP information shared with all partners including City Fire Department	(VI.B.9)Office of Innovation aids multi-department planning	(VI.B.3)Support establishment of non-profit or non-governmental organization (VI.B.5)Partners represent all neighborhoods and cultures (VI.B.6)2 Academic institutions have UFMPs	(VI.B.6)50% of academic institutions have a UFMP (VI.B.7)Tree giveaway programs expand due to demand	
C. VOLUNTEERS	(VI.C.2.5)City-hosted planting event	(VI.C.1)Forestry volunteers increase by 10%	(VI.C.1)Forestry volunteers increase by 50% (VI.C.3)Volunteers represent all neighborhoods and demographics	(VI.C.1)Forestry volunteers increase by 75% (VI.C.5)Tree City USA award for 53rd consecutive year	(VI.C.1)Forestry volunteers increase by 100% (VI.C.5)Tree City USA award for 63rd consecutive year