CITY MANAGER /CITY ATTORNEY
SIGNATURE REQUEST ROUTING FORM

Include insurance documents, signed agreements, and all relevant documentation.

All documents must be signed by contractor/lessee and in Munis (if applicable) prior to routing to City Clerk.

Request:

■ City Manager Signature ■ City Attorney Review/Approval ☐ Notarization ☐ Munis Approval NOT REQUIRED

☐ **IT Reviewed (if applicable) – THIS CONTRACT INVOLVES TECHNOLOGY, AN EMAIL FROM THE IT DIRECTOR APPROVING THE CONTRACT MUST ACCOMPANY THIS FORM.**

All documents routed for signatures must be approved by Department Head.

Department Head Approval: _____ Date: _____
Signature

To be completed by initiating department: (PLEASE COMPLETE ENTIRELY)

Staff Responsible: Ben Heistein Department: Parks & Community Services Phone Ext: 3150

Contractor/Vendor Name: Davey Resource Group

Project Title: Consultant for Urban Forest Management Plan

Original Contract Amount: $268,664.00 Changer Order/Amendment No(s) _____

Amendment Amount $ _____ Cumulative Total $ _____

Funding Source (Name of Acct. & Enterprise) Community Forestry Grant

Budget Account No(s): TBD

Resolution No. (if any): TBD MUNIS Contract No. (if applicable): TBD

- ■ Document is within CM signature authority up to $100,000 (cumulative) for professional services or Public projects meeting the amount set forth in subdivision (b) of California Public Contract Code Section 22032, except as otherwise provided by State legislation, the project shall be let to contract by formal bidding procedure.
- ■ Insurance is up to date and included.
- ☐ (For Bids only) DIR Extract Form has been filled and attached (due within 5 days of award of contract by Council or within 5 days from City Manager signature of Quick Bid)
- ■ This is a form agreement prepared by City Attorney's Office.
  (See http://intranet.ci.watsonville.ca.us/node/303)
  - ■ No changes were made; or
  - ☐ Changes are described AND redlined version is attached.
- ☐ This is not a form agreement prepared by City Attorney's Office.
  Previously prepared or reviewed by: _____
- ☐ $10,000 to $100,000 complete memo stating quotes obtained, include names and amounts, if did not obtain any, explain reasons pursuant to WMC 3-5.530.
- ☐ Sole Source (attach memo explaining reasons for sole source or list any other exemptions pursuant to (WMC 3-5.210)).

Description of project, scope of work or purchase (must be detailed, incomplete or deficient statements will be sent back):
Contract going before City Council on 4/27/2021.

☐ *Consultant Required to File FPPC Form 700* (Statement of Economic Interests)

CONTRACT FOR CONSULTANT SERVICES BETWEEN THE CITY OF WATSONVILLE AND DAVEY RESOURCE GROUP, INC.

THIS CONTRACT, is made and entered into this_____, by and between the **City of Watsonville,** a municipal corporation, hereinafter called “City,” and **DAVEY RESOURCE GROUP, INC.,** hereinafter called "Consultant."

WITNESSETH

WHEREAS, the City needs to obtain certain professional, technical and/or specialized services of an independent contractor to assist the City in the most economical manner; and

WHEREAS, Consultant has the requisite skill, training, qualifications, and experience to render such services called for under this Contract to City.

THE PARTIES HEREBY AGREE AS FOLLOWS:

SECTION 1. SCOPE OF SERVICES. Consultant shall perform those services as specified in detail in Exhibit "A," entitled "SCOPE OF SERVICES" which is attached hereto and incorporated herein.

SECTION 2. TERM OF CONTRACT. The term of this Contract shall be from April 27, 2021 to September 30, 2023, inclusive.

SECTION 3. SCHEDULE OF PERFORMANCE. The services of Consultant are to be completed according to the schedule set out in Exhibit "B," entitled "SCHEDULE OF PERFORMANCE," which is attached hereto and incorporated herein. Consultant will diligently proceed with the agreed Scope of Services and will provide such services in a timely manner in accordance with the "SCHEDULE OF PERFORMANCE."

SECTION 4. COMPENSATION. The compensation to be paid to Consultant including both payment for professional services and reimbursable expenses as well as the rate and schedule of payment are set out in Exhibit "C" entitled "COMPENSATION," which is attached hereto and incorporated herein.

SECTION 5. METHOD OF PAYMENT. Except as otherwise provided in Exhibit "C," each month, Consultant shall furnish to the City a statement of the work performed for compensation during the preceding month. Such statement shall also include a detailed record of the month's actual reimbursable expenditures.

SECTION 6. INDEPENDENT CONSULTANT. It is understood and agreed that Consultant, in the performance of the work and services agreed to be performed by Consultant, shall act as and be an independent Consultant and not an agent or employee of City, and as an independent Consultant, shall obtain no rights to retirement

benefits or other benefits which accrue to City's employees, and Consultant hereby expressly waives any claim it may have to any such rights.

SECTION 7. ASSIGNABILITY. Consultant shall not assign or transfer any interest in this Contract nor the performance of any of Consultant's obligations hereunder, without the prior written consent of City, and any attempt by Consultant to so assign this Contract or any rights, duties or obligations arising hereunder shall be void and of no effect.

SECTION 8. INDEMNIFICATION.

To the full extent permitted by law (subject to the limitations of Civil Code section 2782.8 for any “design professional services” performed under this Contract), Consultant will indemnify, hold harmless, release and defend the City (including its officers, elected or appointed officials, employees, volunteers or agents) from and against any and all liability or claims (including actions, demands, damages, injuries, settlements, losses or costs [including legal costs and attorney’s fees])(collectively “Liability”) of any nature, to the extent arising out of, pertaining to, or relating to Consultant’s negligence, recklessness, or willful misconduct in the performance of this Contract. In no event shall the cost to defend charged to the Consultant exceed the Consultant’s proportionate percentage of fault. Consultant’s indemnification obligations under this Contract are not limited by any limitations of any insurance held by Consultant, including, but not limited to, workers compensation insurance.

SECTION 9. INSURANCE.

A. Errors and Omissions Insurance. Consultant shall obtain and maintain in full force throughout the term of this Contract a professional liability insurance policy (Errors and Omissions), in a company authorized to issue such insurance in the State of California, with limits of liability of not less than One Million Dollars ($1,000,000.00) to cover all professional services rendered pursuant to this Contract.

B. Auto and Commercial General Liability Insurance. Consultant shall also maintain in full force and effect for the term of this Contract, automobile insurance and commercial general liability insurance with an insurance carrier satisfactory to City, which insurance shall include protection against claims arising from bodily and personal injury, including death resulting therefrom, and damage to property resulting from any actual occurrence arising out of the performance of this Contract. The amounts of insurance shall not be less than the following:

(1) Commercial general liability insurance, or equivalent form, with a combined single limit of not less than $500,000.00 per occurrence. If such insurance contains a general aggregate limit, such limit shall apply separately to each project Consultant performs for City. Such insurance shall (a) name City, its appointed and elected officials, and its employees as insureds; and (b) be primary with respect to insurance or self-insurance programs maintained by City and (c) contain standard separation of insured's provisions.

(2) Business automobile liability insurance, or equivalent form, with a combined single limit of not less than $500,000.00 per occurrence. Such insurance shall include coverage for owned, hired and non-owned automobiles.

C. Workers' Compensation Insurance. In accordance with the provisions of Section 3700 of the Labor Code, Consultant shall be insured against liability for Workers' Compensation or undertake self-insurance. Consultant agrees to comply with such provisions before commencing performance of any work under this Contract.

D. Proof of Insurance to City before Notice to Proceed to Work. Consultant shall satisfactorily provide certificates and endorsements of insurance to the City Clerk before Notice to Proceed to Work of this Contract will be issued. Certificates and policies shall state that the policy shall not be canceled or reduced in coverage without thirty (30) days written notice to City. Approval of insurance by City shall not relieve or decrease the extent to which Consultant may be held responsible for payment of damages resulting from services or operations performed pursuant to this Contract. Consultant shall not perform any work under this Contract until Consultant has obtained the required insurance and until the required certificates have been submitted to the City and approved by the City Attorney. If Consultant fails or refuses to produce or maintain the insurance required by these provisions, or fails or refuses to furnish City required proof that insurance has been procured and is in force and paid for, City shall have the right at City's election to forthwith terminate this Contract immediately without any financial or contractual obligation to the City. As a result of such termination, the City reserves the right to employ another consultant to complete the project.

E. Written notice. Contractor shall provide immediate written notice if (1) any insurance policy required by this Contract is terminated; (2) any policy limit is reduced; (3) or any deductible or self insured retention is increased.

SECTION 10. NON-DISCRIMINATION. Consultant shall not discriminate, in any way, against any person on the basis of age, sex, race, color, creed, national origin or disability in connection with or related to the performance of this Contract.

SECTION 11. TERMINATION.

A. City and Consultant shall have the right to terminate this Contract, without cause, by giving not less than ten (10) days written notice of termination.

B. If Consultant fails to perform any of its material obligations under this Contract, in addition to all other remedies provided by law, City may terminate this Contract immediately upon written notice.

C. The City Manager is empowered to terminate this Contract on behalf of City.

D. In the event of termination, Consultant shall deliver to City copies of all work papers, schedules, reports and other work performed by Consultant and upon receipt thereof, Consultant shall be paid in full for services performed and reimbursable expenses incurred to the date of termination.

SECTION 12. COMPLIANCE WITH LAWS. Consultant shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local governments. Consultant shall obtain and maintain a City of Watsonville business license during the term of this Contract.

SECTION 13. GOVERNING LAW. City and Consultant agree that the law governing this Contract shall be that of the State of California. Any suit brought by either party against the other arising out of the performance of this Contract shall be filed and maintained in the Municipal or Superior Court of the County of Santa Cruz.

SECTION 14. PRIOR CONTRACTS AND AMENDMENTS. This Contract represents the entire understanding of the parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This Contract may only be modified by a written amendment.

SECTION 15. CONFIDENTIAL INFORMATION. All data, documents, discussions or other information developed or received by or for Consultant in performance of this Contract are confidential and not to be disclosed to any person except as authorized by the City Manager or his designee, or as required by law.

SECTION 16. OWNERSHIP OF MATERIALS. All reports, documents or other materials developed or received by Consultant or any other person engaged directly by Consultant to perform the services required hereunder shall be and remain the property of City without restriction or limitation upon their use.

SECTION 17. COVENANT AGAINST CONTINGENT FEES. The Consultant covenants that Consultant has not employed or retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure the Contract, and that Consultant has not paid or agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fees, commissions, percentage, brokerage fee, gift, or any other consideration contingent on or resulting from the award or making of this Contract, for breach or violation of this covenant, the City shall have the right to annul this Contract without liability, or in its discretion, to deduct from the Contract price or consideration or otherwise recover, the full amount of such fee, commission, percentage fee, gift, or contingency.

SECTION 18. WAIVER. Consultant agrees that waiver by City or any one or more of the conditions of performance under this Contract shall not be construed as waiver of any other condition of performance under this Contract.

SECTION 19. CONFLICT OF INTEREST.

A. A Consultant shall avoid all conflict of interest or appearance of conflict of interest in performance of this Contract. Consultant shall file a disclosure statement, if required by City Council Resolution, which shall be filed within thirty (30) days from the effective date of this Contract or such Resolution, as applicable.

B. No member, officer, or employee of the City, during their tenure, or for one (1) year thereafter, shall have any interest, direct or indirect, in this Contract or the proceeds thereof and Consultant agrees not to allow, permit, grant, transfer, or otherwise do anything which will result in such member, officer, or employee of the City from having such interest.

SECTION 20. AUDIT BOOKS AND RECORDS. Consultant shall make available to City, its authorized agents, officers and employees, for examination any and all ledgers and books of account, invoices, vouchers, canceled checks and other records or documents evidencing or related to the expenditures and disbursements charged to the City, and shall furnish to City, its authorized agents and employees, such other evidence or information as City may require with respect to any such expense or disbursement charged by Consultant.

SECTION 21. NOTICES. All notices shall be personally served or mailed, postage prepaid, to the following addresses, or to such other address as may be designated by written notice by the parties:

CITY	**CONSULTANT**
City Clerk's Office 275 Main Street, Suite 400 Watsonville, CA 95076 (831) 768-3040	Davey Resource Group, Inc. 295 S. Water Street, Suite 300 Kent, OH 44240-5193 (330) 673-5685

SECTION 22. EXHIBITS:

Exhibit A: Scope of Services
Exhibit B: Schedule of Performance
Exhibit C: Compensation

///

///

///

///

WITNESS THE EXECUTION HEREOF, on the day and year first hereinabove written.

CITY	**CONSULTANT**
CITY OF WATSONVILLE	**DAVEY RESOURCE GROUP, INC**
BY _____ Matthew D. Huffaker, City Manager	BY_____ Amber Krebbers, Regional Operations Manager

ATTEST:

BY _____
Beatriz Vázquez Flores, City Clerk

APPROVED AS TO FORM:

BY _____
Alan J. Smith, City Attorney

EXHIBIT "A"

SCOPE OF SERVICES

The scope of services is as follows and shall consist of the development of a City Tree Inventory of up to 6,000 trees, i-Tree Eco Sample Inventory of private property and wetland trees, Urban Tree Canopy and Land Cover Assessment, Urban Tree Canopy Mapping and Analysis including a Priority Planting Index and Canopy Goal Identification, 50 Year Urban Forest Management Plan, Tree Protection Ordinance, Tree Species List, Project Specific Website, Monthly Status Updates (calls), Operations Review, Robust Community Engagement, Community Survey, Data Management and Delivery, and other urban forestry consultant services according to CAL FIRE grant requirements and the proposal submitted to the City by Davey Resource Group, Inc. on February 22nd, 2021 included herein:

DAVEY Resource Group

Corporate Headquarters
295 S. Water St.
Suite 300
Kent, OH 44240-5193
330-673-5685
Toll-Free 1-800-828-8312
Fax: 330-673-0860

February 22, 2021

Ben Heistein
Assistant Parks & Community Services Director
City of Watsonville Department of Parks & Community Services
231 Union Street
Watsonville, CA 95076
Sent to: benjamin.heistein@cityofwatsonville.org

Dear Mr. Heistein,

It is a pleasure to submit this proposal to the City of Watsonville for an updated inventory and urban forest management plan. Davey Resource Group, Inc. a subsidiary of The Davey Tree Expert Company, provides a variety of urban forestry consulting services, and we are delighted to have the opportunity to again serve the City of Watsonville.

The Davey Resource Group team is devoted to providing excellent customer service through our technical expertise and our passion for innovative solutions. We are one of the most respected urban forestry consultants serving North America. Our reputation for providing science-based solutions, demonstrating Best Management Practices, accuracy, reliability, and trustworthiness are among the key reasons we are often selected to represent municipal urban forestry interests. We have long-standing relationships with many clients who return to us again and again for innovative, thorough, and cost-effective services. We recognize that our success depends on meeting your needs and we are excited about the opportunity to serve the arboricultural interests of the City of Watsonville. Above all else, we are flexible in making this project work for the City. We are more than willing to examine our methodologies, personnel, and pricing prior to contract award to update the City tree inventory and develop an urban forest master plan that is achievable, sustainable and supported by Watsonville residents, community groups, businesses, and other stakeholders.

We look forward to the opportunity to discuss our proposal and make any adjustments required to ensure the City of Watsonville receives the greatest value for these services. If you have any questions or need clarification on any aspect of this proposal, please contact Anne Fenkner, Project Developer at (916) 214-5908 and Anne.Fenkner@Davey.com.

Thank you for your consideration. We look forward to assisting the City of Watsonville in meeting its CAL FIRE grant responsibility and advancing its urban forestry goals.

Respectfully submitted,

Emily Spillett
Area Manager
Davey Resource Group, Inc.
415.725.6297 | Emily.Spillett@Davey.com

February 2021

DAVEY Resource Group

WATSONVILLE, CA

URBAN FORESTRY MANAGEMENT PLAN & TREE INVENTORY SERVICES

Prepared for:

Ben Heistein
Assistant Parks & Community Services Director

City of Watsonville
231 Union Street
Watsonville, CA 95076

Prepared by:

Anne Fenkner
Project Developer

Davey Resource Group, Inc.
295 S. Water Street
Suite300
Kent, OH 44240

TABLE OF CONTENTS

SECTION 1:

Introduction & About Davey Resource Group, Inc.

INTRODUCTION

The City of Watsonville's commitment to advance its urban forestry program aligns with its strategic goals and priorities to develop and sustain a healthy, prosperous community. The environmental, economic, aesthetic and health benefits provided by the regional urban forestry enhances the City's livability, desirability, and prosperity. Conducting a tree census and creating and adopting an Urban Forestry Management Plan (UFMP) will serve as a guide for understanding, planning, and caring for this important resource. An updated Tree Ordinance will provide the authorization and standards for best management activities. By themselves, neither document can ensure that the trees in the City of Watsonville will be improved or even maintained.

By infusing and implementing the two documents as a cohesive unit, the City of Watsonville will position itself with the structure and tools to attain a healthy, vigorous, and well-managed community forestry for generations to come.

The City will also fulfill its Urban Forestry Grant agreement (8GG19401) with the California Department of Forestry and Fire Protection (CAL FIRE) to develop the "Watsonville Community Forestry Project".

Davey Resource Group, Inc. (DRG) is a national leader in professional urban and community forestry consulting services. Our staff provides extensive knowledge of urban forestry management, planning, and practices drawn from working with communities across North America. For this project, DRG presents our best team of seasoned professionals. Each person we are proposing is passionate about advancing urban forestry through community involvement, science, and technology.

The development of a UFMP is a comprehensive exercise in collaboration, education, research, and community participation. The framework of the plan will be generated through goal-setting and research. Research will include both historical and current program analysis, stakeholder meetings, and community input, reinforced by document examination. This process will be guided by Watsonville's specific areas of interest, as well as our experience working with similar clients. The key components of the plan will lead to stronger connections and engagement with stakeholders and the City.

For the City of Watsonville, we will address all tasks identified in the Request for Proposal for Urban Forestry Management Plan & Tree Inventory Services to create a clear, understandable and useful UFMP that reflects the vision, needs, resources, culture, and environment of the City. The following methodology outlines our approach to data collection and the UFMP development process. However, flexibility is indispensable to a successful project and we offer the ability to change or modify our plan so that it best meets your vision and needs.

About Davey Resource Group, Inc.

Davey Resource Group, Inc. "DRG" is a wholly-owned subsidiary of The Davey Tree Expert Company, which was established in 1880. Davey employs 10,000+ people in North America and is recognized as the ninth-largest employee-owned company in the US. Our services range from residential and commercial tree care to utility safety, academic and technological research, and natural resource consulting, protection, and planning. Davey, with its home office in Kent, OH, operates in 45 states, with offices throughout the country.

DRG provides expert consulting to a wide variety of clients, including municipalities, parks, cemeteries, golf courses, utilities, and the private sector. We have inventoried and assessed well over five million trees while conducting more than 1,500 tree inventory projects. Our urban forestry consultants include International Society of Arboriculture (ISA) Certified Arborists, Geographic Information Systems (GIS) analysts, urban planners, and biological and ecological scientists with the knowledge, work experience, and training to complete your project on time and within budget. Our goal in serving the City of Watsonville is to exceed your expectations.

DRG has over 28 years of experience working with clients like the City of Watsonville, providing them with professional arboricultural, urban forestry consulting, and mapping services. Our customized approach to every project ensures that you receive the ultimate urban forestry solutions. DRG is the preferred contractor for assisting municipalities in meeting the CAL FIRE Community Urban Forestry grant requirements. Within California, DRG has conducted more urban forestry inventory projects and management plans than any other company. We are familiar with CAL FIRE grant requirements and collection attributes. We are also familiar with the City of Watsonville and its urban forest. In 2011, DRG was invited to complete Watsonville's first tree inventory. DRG finished the project on time and within budget. We appreciate your trust in our experience and we appreciate the consideration to shepherd your urban forestry program to its next level. By selecting DRG, the City of Watsonville will have a partner that can deliver quantifiable inventory data, expertise in urban forestry analysis, and professional ability and expertise to deliver an accurate, thoughtful, community-centric management plan and inventory in a time-sensitive manner, to meet all CAL FIRE grant requirements.

1/2 million
Trees Inventoried Annually

400
Urban Forest Plans Developed

223
Current TreeKeeper® Clients

85
UTC Assessments Since 2008

100+
Clients Hire DRG Annually

By choosing DRG, Watsonville will benefit in the following ways:

- **Leverage the Company with the most Experience and Expertise:**

  DRG has collected urban forestry inventory data for more entities than any other company. The City of Watsonville can leverage our vast network, experience, and expertise to receive a customized approach using industry best management practices and innovative solutions.

- **Our people are invested in your success:**

  Our employees are committed to the idea of improving our region through trees and urban forestry. As an employee-owned company, our employees are committed to the success of each client and project. We deliver on time and on budget.

- **We are committed to creating value:**

  Our arborists, urban foresters, and field technicians present expertise in local dendrology. We are innovative and, as a national company, we have the ability to increase resources to meet the timeframe and staffing requirements identified in the RFP. DRG's collective experience and strategic partnerships will present significant efficiencies to this project and the City.

DRG is an industry leader through our research, product development, and service innovation.

As an environmental services company, we are uniquely situated to deliver solutions for many of society's critical challenges—climate change, social inequality, and economic development. By applying the latest research and techniques to our proven solutions for a growing world, we continue to deliver outstanding service to our clients and society.

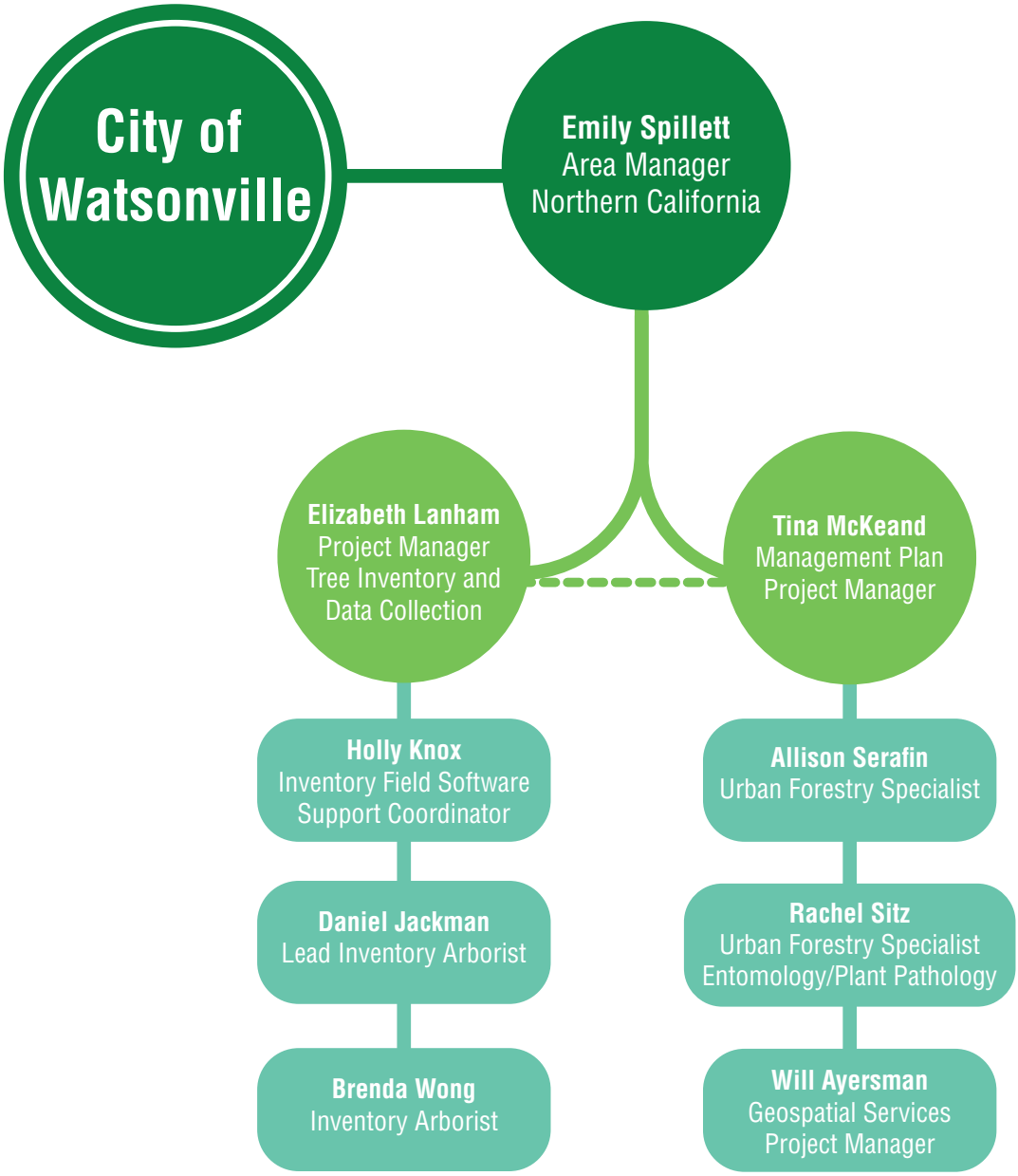
SECTION 2:

TEAM AND EXPERIENCE

PROJECT TEAM

The City of Watsonville will be well served by the experience, expertise, and quality of our personnel that will be assigned to this project. All members of this team hold full-time employment status with DRG. The overall project manager will be Emily Spillett. She will provide oversight of the project and ensure client satisfaction. Assisting her with the management of inventory collection and delivery is Elizabeth Lanham. Tina McKeand will lead the data analysis and management plan development component of the project. Our team operates as a cohesive unit—there is always someone to communicate with if the need arises. DRG is proud to present the following team for this project.

Below is a visual representation of the team structure for this project:



Project Management

Emily Spillett | Northern California Area Manager

Responsibilities on the Project: Ms. Spillett will provide executive leadership for this project to ensure optimum client satisfaction. Additionally, she will be supporting the community outreach efforts throughout the project.

Emily Spillett is an Area Manager with 20 years of professional experience working with utility forestry, urban forestry, land use planning, and natural resource management issues with DRG. In this position, her role is to ensure client satisfaction, strong communication, and adherence to project scope and timeliness. Ms. Spillett manages our Northern California team of professionals, including project coordinators, field supervisors, inventory arborists, urban and community forestry specialists, and researchers that assist Davey Resource Group's clients in achieving their goals.

Specifically, Emily Spillett has managed over 100 urban forest projects that have included inventories, management plans, and unique consulting projects. These projects have been completed on time, within budget, and to the satisfaction of Davey's clients. She was also the project manager (leading two project coordinators) of the first Urban Forest Inventory Analysis project that took place in the country. As part of her recent projects, she has provided coordination and support of the community outreach components. Ms. Spillett's passion for educating and reaching communities serves as a continual and evolving asset for our clients.

Ms. Spillett holds a Bachelor of Science degree in Environmental Forest Biology from the State University of New York College of Environmental Science and Forestry. She serves as the past president of the Board of the California Urban Forest Council and is a member and volunteer for the Western Chapter of the International Society of Arboriculture.

Inventory Collection and Software Team

Davey Resource Group's professional, International Society of Arboriculture (ISA) Certified Arborists will facilitate the collection of tree inventory information for the City of Watsonville.

Elizabeth Lanham | Project Manager - Tree Inventory and Data Collection

Responsibilities on the Project: Elizabeth Lanham will serve as the project manager for the data collection and delivery portion of this project.

Elizabeth Lanham has been with DRG since 2014 and is a Project Manager for Northern California. Since working for DRG, Elizabeth has contributed to the success of several tree inventory projects, including the management of tree inventories for the City of Santa Cruz, County of Santa Clara, and most recently, the City of Oakland. Elizabeth and her team are currently working with a nonprofit partner on an educational and policy-focused project regarding the Wildland-Urban Interface (WUI) and the value of the urban forest within the WUI. She also manages all municipal contracts. Elizabeth supervises the Northern California Inventory and Consulting Arborist team. As a Consultant, she developed many tree protection plans, homeowner arborist reports, performed urban tree risk assessments, and has experience with construction monitoring for tree protection plans. She is highly experienced in TRAQ assessment and quality control. Past assignments included working with the City of Palo Alto's Public Works

urban forestry team performing tree protection and landscape review for the City's Development plans as well as leading special outreach and education programs for one of our non-profit partners and CAL FIRE.

Prior to working with DRG, Elizabeth worked for the City of San Jose as an Arborist Technician. There, she managed the care of the city's 20,000 Special Landscape Assessment District trees, ensured homeowner satisfaction while urban forestry goals were still met, and pursued innovative and sustainable methods of urban forestry. She also managed the city's street tree inventory. Elizabeth is an International Society of Arboriculture (ISA) Certified Arborist®(WE-9234A), and an ISA Tree Risk Assessment Qualification (TRAQ) credential holder. Elizabeth Lanham holds a Bachelor of Science degree in Environmental Science with a concentration in CEQA from San Jose State University.

Holly Knox | Inventory Field Software Support Coordinator

Holly Knox is a senior geospatial analyst whose expertise is applying GIS technology to environmental analysis. Ms. Knox currently plays a key role in coordinating municipal inventory projects. She is responsible for the setup, testing, and programming of custom input forms for our field inventory projects utilizing our mobile mapping software solutions, including Davey Resource Group's Rover, ESRI ArcPad, and ArcGIS for Collector software. Her routine work involves managing data and imagery acquisition, manipulation, interpretation, and conversion. Ms. Knox is also responsible for the creation of field maps and final cartographic products for many ecological, urban forestry, and utility mapping projects.

Ms. Knox holds a Master of Science degree in Geographic Information Systems from American Sentinel University. She also has a Bachelor of Arts degree in Geography from Kent State University with an emphasis on Natural Resource Management and Conservation, as well as a minor in Anthropology.

Daniel Jackman | Inventory Arborist

Dan Jackman joined DRG in September of 2019. He graduated from the University of Massachusetts Amherst with a degree in Environmental Science in 2016. After graduating, Dan assisted in managing a fruit orchard in Hawaii through World Wide Opportunities on Organic Farms (WWOOF). There he was responsible for fertilizing, pruning, and propagating plants as well as harvesting a variety of fruits. Upon returning from Hawaii, he worked for ACRT Inc as a Consulting Utility Forester in Western Massachusetts. He was responsible for auditing work, performing tree risk assessments, and assisted in managing the utility's tree removal program. Currently, Dan performs a variety of duties in the Bay Area including developing arborist reports, tree preservation reports, construction monitoring reports, as well as being the contract arborist at the City of Palo Alto's Development Center. Dan is an ISA Certified Arborist and Utility Specialist (NE-7311AU).

Brenda Wong | Inventory Arborist

Brenda Wong has been with Davey Resource Group since 2019 and is an inventory arborist for the San Francisco Bay Area. Brenda is based in California and has worked on tree inventories for Santa Clara County Parks, the City of Santa Cruz, and the City of Oakland. Brenda is skilled in site assessment and tree identification and experienced with urban tree risk assessment.

Brenda Wong holds an Associate of Science Degree in Urban Forestry, from Merritt College, she is an ISA Certified Arborist (WE-12933A) and ISA Tree Risk Assessment Qualification (TRAQ) credential holder.

Urban Forestry Management Plan and Tree Protection Ordinance Development Team

Tina McKeand | Sr. Project Manager/ ISA Board Certified Master Arborist

Responsibilities on the Project: Tina McKeand will serve as the project manager and principal consultant for the development of the UFMP and Tree Protection Ordinance.

Tina McKeand is a Principal Consultant for the Environmental Consulting team serving the Western States. She has managed and contributed to some of the most distinguished urban forestry assessments, management, and master plans in the country. In addition to leading the development of urban forestry master and management plans, Tina also serves DRG as a national urban forestry policy advisor for municipal policy and ordinances. Her most recently completed assignments include Urban Forestry Plans for the cities of Boulder, South San Francisco, Woodland, Yuba City, and Garden Grove. She has contributed and/led every urban forestry planning project listed within the "Experience" section of this proposal. In addition to the listed projects, Tina has served as the Project Manager of additional seminal projects such as a Forestland Assessment and Management Plan for Anchorage, and an Assessment of Portland Street Trees as a Public Asset for the Portland Bureau of Planning. She has led Advanced Resource Analysis for the State of Montana, and the cities of Palo Alto, San Mateo, Burlingame, Orange, Clovis, Burlingame, Pasadena, and Tempe. She was a co-author and illustrator for a US EPA project Stormwater to Street Trees on the use of stormwater retention strategies in cities across the United States.

Tina McKeand is a Board Certified Master Arborist and Municipal Specialist (WE-5005BM) and a graduate of the Municipal Forestry Institute. She is the former Urban Forester for the City of Yuma, Arizona, and has been working for Davey for more than thirteen years. Tina McKeand is a former president of the Arizona Community Tree Council, a volunteer for the Western Chapter of the International Society of Arboriculture, and the Nevada Division of Forestry Natural Resources Advisory Committee.

Allison Steere | Sr. Associate Consultant

Allison Steere joined Davey Resource Group in 2016 as an inventory technician. Today, Mrs. Steere is a contributor, researcher, and writer for urban forestry assessments and management and master plans. As part of her role, Mrs. Steere has an active role in developing content for urban forestry master plans, assisting with client needs and expectations, and assuring client satisfaction.

While earning her degree in Horticulture from Colorado State University (CSU), she worked for Dr. Whitney Cranshaw assisting with research of impacts of systemic pesticides in the prevention of Emerald Ash Borer on honeybees and other pollinators, resistance in European Elm Scale, and other horticulture pests. In addition to her research, Mrs. Steere was responsible for coordinating entomological outreach activities with local schools, farmer's markets, and community events. Also, while studying at CSU, Mrs. Steere participated in an internship program at Walt Disney World, where she was responsible for managing a hydroponic greenhouse and providing guided tours of the greenhouse facilities to guests. Mrs. Steere is a Certified Arborist (RM-7919A) and Qualified Tree Risk Assessor, with both professional credentialing programs administered by the International Society of Arboriculture.

Rachael Sitz | Associate Consultant, Entomology/Plant Pathology

Rachael Sitz, Ph.D. joined DRG in 2019 after 10 years of experience researching insect pests and diseases impacting urban trees. Her previous work at the USDA Forest Service and Colorado State University focused on the interactions between insects and plant pathogens, means of pest and pathogen spread, and the basic biology of insect pests. She brings expertise in guiding tree care professionals on the proper timing to manage pests and diseases as well as suggestions for practical management options. She has been integral in the development of recommendations for thousand cankers disease, European elm scale, and drippy blight disease. Furthermore, she has extensive experience in data analysis and writing, with significant contributions to over 15 scientific publications and general reports. Ms. Sitz holds a Ph.D. and master's degree specializing in entomology and plant pathology from Colorado State University and bachelor's degrees in insect science and plant biology from the University of Nebraska-Lincoln. She is a member of the American Phytopathological Society of America and the Entomological Society of America. Her contributions to the Entomological Society of America were recently recognized with the J.H. Comstock Award.

Will Ayersman | GIS

Will Ayersman is the geospatial services project manager within DRG. He is a lead geospatial analyst with extensive experience applying spatial analysis and predictive modeling to natural resource issues. His daily responsibilities involve GIS project coordination for remote sensing and image analysis projects, LiDAR analysis, database and project management, and the creation and design of predictive and suitability models. Since 2011, he has been the project lead on all urban tree canopy (UTC) assessment and forestry analysis projects for urban forestry and utility services, including generating custom mapping and reports for transmission right-of-way projects.

Will Ayersman plays a key role in the development of DRG's innovative GIS tools and solutions, focusing on the urban canopy effects of stormwater, watersheds, and ecosystem cost/benefits analysis. He has experience and knowledge in the field of forestry resource management, cartography, landscape metrics, and spatial statistics. He also has strong interests in the research and development of new spatial analysis procedures, timber stand dynamics, and the ecological impacts of invasive species.

Will Ayersman holds a Master of Science degree in Forestry and a Bachelor of Science degree in Forest Management from West Virginia University. He is a member of the Association of American Geographers (AAG), the American Society of Photogrammetry and Remote Sensing (ASPRS), Ohio Urban Regional System Association (URISA) Ohio Chapter, and the Kentucky Association of Mapping Professionals (KAMP). He joined DRG in April 2011. Will works from our corporate headquarters in Kent, Ohio.

Experience

DRG has collected and assessed more urban tree data and has conducted more municipal tree collection projects than any other company. Additionally, DRG has inventoried more urban trees within California and has supported more CAL FIRE funded municipal urban forestry projects than any other company. We have completed some of the most significant and demanding UFMPs across the country. In the past five years, DRG has completed 66 projects of similar scope as requested by the City of Watsonville. Each required a level of professionalism and detail similar to that identified in the City of Watsonville RFP for Urban Forest Management Plan and Tree Inventory Services. Consequently, our list of satisfied customers is extensive. The following are project overview examples as requested in the RFP. The chart that follows summarizes DRG's experience with additional projects similar to the services requested by the City of Watsonville. A list of non-municipal and or national projects with description, location, contact information, status, etc., will be presented upon request.

City of Oakland

Project: CAL FIRE-Funded Municipal Tree Inventory and Urban Forest Management Plan

Contact: David Moore | Tree Supervisor II | dmoore@oaklandca.gov | 510.615.5852

DRG has been working with the City of Oakland Department of Public Works to fulfill CAL FIRE Urban Forest Management Grant requirements that include a complete street and park tree inventory. DRG is under contract for collecting inventory on an estimated 100,000 trees and developing a UFMP for the community. The project began in February 2020 and the inventory is nearly complete (estimated completion Spring 2021). Data is shared on a daily basis for City staff to review within the City's TreeKeeper software system. The UFMP will include the analysis of the tree inventory data, GIS canopy studies, and a robust community outreach program.

City of Los Angeles, Bureau of Street Services

Project: Street Tree Inventory

Contact: Anne Veal | Analyst | anne.veal@lacity.org | 213. 847.3031

DRG is under contract to inventory 700,000 streets for the City of Los Angeles. This is the largest urban tree census in the country. CAL FIRE recommended attributes are being collected by DRG arborists in a sequential approach. The data is collected and uploaded into the city's TreeKeeper software management system for real-time monitoring and use. An i-Tree report summarizes environmental tree benefits within each neighborhood zone. The reports are completed and delivered within 2 weeks of concluding the collection of tree data within each neighborhood zone. Completing the inventory is a critical step in achieving the two primary urban forestry goals laid out in Mayor Garcetti's Green New Deal: planting 90,000 trees by 2021 and increasing tree canopy in areas of greatest need by at least 50% by 2028.

City of Garden Grove, California

Project: CAL FIRE funded Urban Forest Management Plan

Contact: Paul Guerrero | Grant Manager | paulg@ggcity.org | 714.741.5181

In the summer of 2019, the City awarded DRG a contract to meet its CAL FIRE grant requirements for a resource analysis of the city tree inventory and a UFMP. The plan includes sections on work programs, policies, an ordinance update to align with best management practices, sustainable urban forest management, design, planting, staffing, stewardship, carbon offset, stormwater management, public tree inventory, and community participation and education. Within the 40 year plan, DRG is identifying the City's long-term urban forest goals in attainable three-to-five year milestones. Additional deliverables include an urban forest analysis, public input, tree maintenance recommendations and schedule, clear criteria for tree removal, and implementation practices to retain healthy and safe trees for the City of Garden Grove. This project is near completion. We are in the process of scheduling Council and other wrap-up presentations.

City of Yuba City

Project: CAL FIRE funded Municipal Tree Inventory and Urban Forest Master Plan

Contact: Brad McIntire | Community Serv. Director| bmcintire@yubacity.net | 530.822.4648

DRG was selected as the best company to conduct a street tree inventory, assessment, and urban forest master plan. Tree census observations were made, and data was collected by ISA Certified Arborists. Tree management software and staff training were provided. The inventory collection can be viewed within TreeKeeper.

Within the master plan process, DRG reviewed the tree species, maintenance techniques, and ordinances related to the protection and care of city trees. DRG collected information on the City's operations and management practices and prepared budget estimates to achieve the plan's recommendations. Additional deliverables within the plan included ordinance review policy alignment and consistency, a priority planting plan with a focus on canopy equity, community outreach and engagement.

Additional References

In addition to the above four references, DRG presents a chart of additional relevant California urban forestry projects. We are delighted to share project profiles and contact information if interested.

California Municipal Client	Year Completed	CAL FIRE funded	Deliverables
Contra Costa County	In Progress		Tree Inventory, Management Plan
Sacramento	In Progress		UTC Mapping and Analysis, Urban Forest Master Plan
Chico	In Progress	x	Inventory, Software
Artesia	In Progress	x	UTC Mapping and Analysis, Urban Forest Master Plan
South San Francisco	2020		UTC Mapping and Analysis, Urban Forest Master Plan
Merced, CA	2020	x	Inventory, UTC Mapping and Analysis, Master Plan
Santa Cruz	2019		Inventory, Software, UTC Mapping and Analysis, Street Tree Management Plan
Woodland	2019	x	UTC Mapping and Analysis, Urban Forest Master Plan
Davis	2019		Inventory
San Jose	2019		Multi-year Inventory
Patterson	2018	x	UTC Mapping and Analysis, Urban Forest Master Plan
Hermosa Beach	2018		Inventory
Tracy	2018	x	UTC Mapping and Analysis, Management Plan
Los Altos, CA	2017		Tree Inventory & Treekeeper software, i-Tree Analysis
Atwater	2017		Urban Forest Management Plan
Stockton	2017	x	Inventory
Roseville	2016		Inventory, UTC Mapping and Analysis, Master Plan
El Cerrito	2016	x	
Orange	2015		UTC Mapping and Analysis, Master Plan
Mountain View	2015	x	i-Tree Streets, Tree Canopy Assessment, Master Plan
Manhattan Beach	2015		i-Tree, Tree Canopy Assessment, Resource Analysis
Citrus Heights	2015		i-Tree, Tree Canopy Assessment, Resource Analysis, Management Plan
Pacific Grove	2015	x	Inventory, i-Tree, Canopy Assessment, Resource Analysis
Patterson	2014	x	Inventory
Mountain View	2014		Urban Forest Management Plan
Berkeley	2014		Inventory
City of Clovis	2013	x	Urban Forest Management Plan

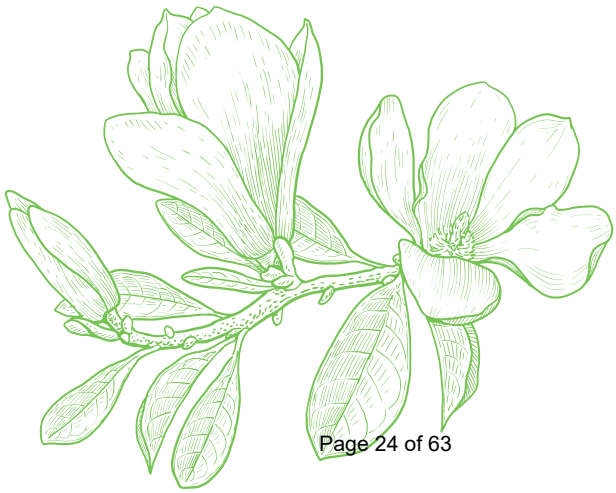
Statement of Understanding

The City of Watsonville is the quintessential California coastal town surrounded by expanses of agricultural areas. Watsonville provides much to its citizens and visitors alike. It is an urban center for the region, however, like many communities in central California, it is significantly deficient in urban forest resources. This lack of urban trees impacts public health and well-being.

The City of Watsonville values its urban forest. The trees on both public and private property contribute a myriad of environmental benefits to both city residents and surrounding geographies. In the past decade, Watsonville has taken steps to strengthen its urban forestry program. The recent process of developing an Urban Greening Plan has enlightened the city and its residents to address the root cause of climate change by identifying projects and policies that have the most potential to curb greenhouse gas emissions. To this end, the City of Watsonville is seeking the services of a qualified and responsible consultant to collect scientifically sound data on all city-owned trees, update ordinances related to trees, and develop an urban forest management plan.

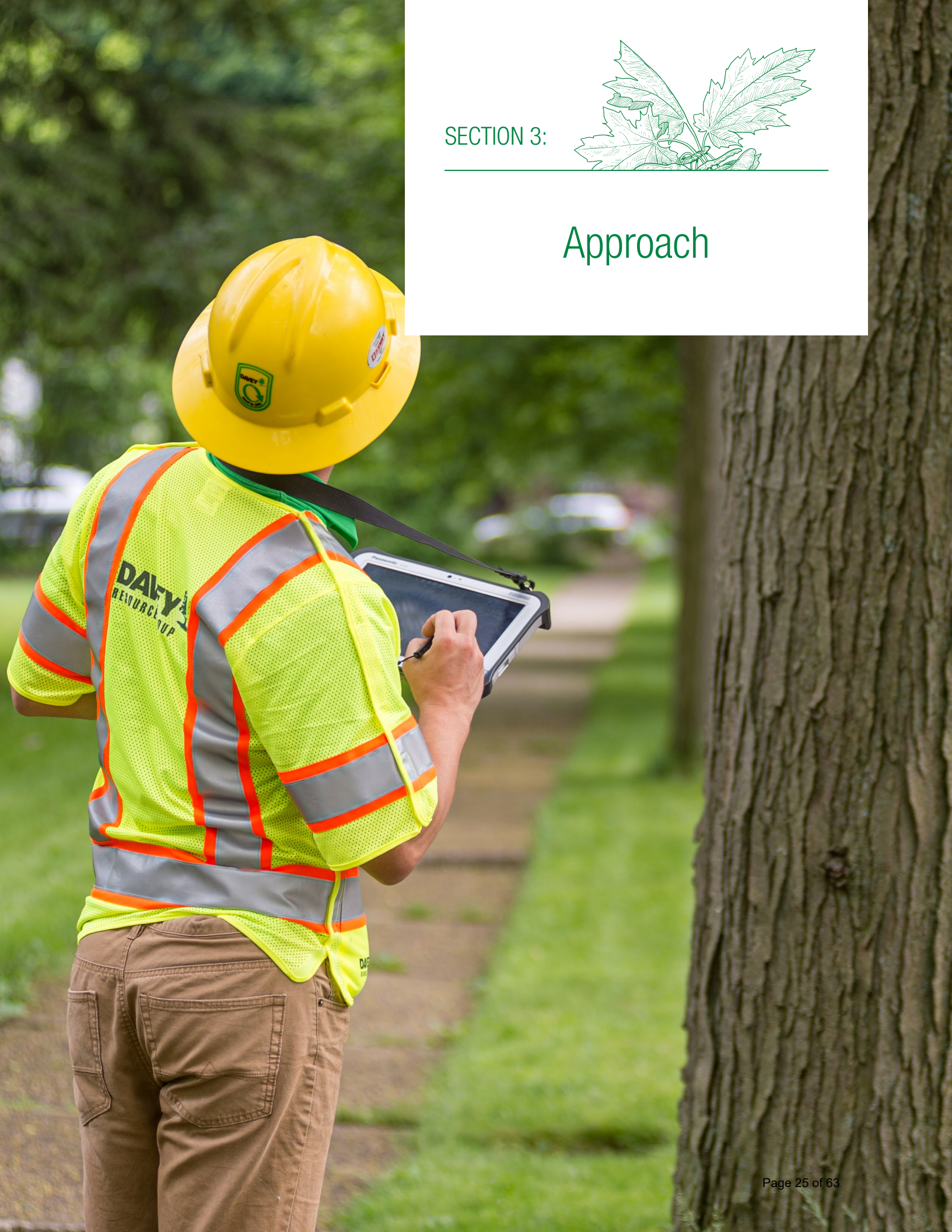
The city's contractor will deploy a team of experienced inventory arborists to assess and collect data on all city owned trees. The data will be analyzed by an ISA Board Certified Master Arborist who will work with a team of urban forest specials to develop an UFMP specific to the needs and aspirations of the City of Watsonville. The plan will evaluate existing policies and conditions, set community goals, and articulate actions to advance urban forestry across the city. The management plan will include a full analysis of the city's tree inventory and a discussion of its ecosystem benefits. To ensure consistency with other city plans and documents, it will cross-reference the Urban Greening Plan (2012) and Climate Action Plan (2015 & 2021 update in progress), while incorporating current city-wide initiatives such as the Green Infrastructure Plan (in progress). The UFMP will review and recommend tree care standards and will present a (redline) Tree Preservation Ordinance update to guide future city forestry activities.

The Watsonville community has demonstrated a rich appreciation for its trees and its urban forest. Residents will be invited to participate in the development of the UFMP by contributing their insights and comments. By engaging community stakeholders, internal staff, and citizens, Watsonville's plan will define key objectives and goals that meet the needs of the city both now and into the future. It will be based on the most current science and best management practices. It will be clear, accessible, and understandable to meet the needs of staff and stakeholders. The intent of Watsonville's UFMP is to carry the city and its residents into the future and help fulfill the principles outlined in the City of Watsonville comprehensive plan, including how climate change impacts the city and how urban forestry management and expansion activities can mitigate these impacts for Watsonville residents and visitors.



SECTION 3:

Approach



APPROACH

The following sections describe DRG's overall methodology for accomplishing Watsonville's scope of work. This section includes a plan of work for the tree inventory and explains the technologies that DRG uses to complete a tree inventory and a description of our approach to providing a distinct urban forestry management plan to guide and support your urban forestry efforts for the next 50 years.

Tree Inventory Collection Plan

Overview

In order to perform a function, structure and composition analyses of the Watsonvilles tree canopy, DRG will perform a complete inventory of public trees and planting sites and a sampling of community trees within the city.

Inventory of Public Trees: The number of public trees and tree locations in the city is estimated at 6,000 trees. DRG will begin by reviewing and integrating existing city tree data as a historical layer into DRG's TreeKeeper software system.

Davey Resource Group will collect CAL FIRE attributes addressed in Appendix 1 of this proposal.

- The DRG inventory team will document attribute information for each tree in accordance with the scope and your feedback.
- Observations will be made and data will be collected by ISA Certified Arborists experienced with inventory collection.
- Data will be collected in a sequence desired by the city. Data will be collected and presented in accordance with all environmental and safety standards and all applicable local, state, and federal ordinances.
- All inventory data collected becomes the property of the City of Watsonville.
- The inventory data will be visible through DRG's TreeKeeper software during collections and delivered in a format compatible with the city's existing ESRI GIS database upon completion.

Kickoff Meeting and Collection Software Development

DRG begins every project with a kickoff meeting that includes our Area Manager, Project Manager, Project Developer, and key project staff. For this initial meeting, it is our hope that your critical project team members will also be in attendance. This includes not only a designated project manager but any key personnel that might be interacting with DRG throughout this process.

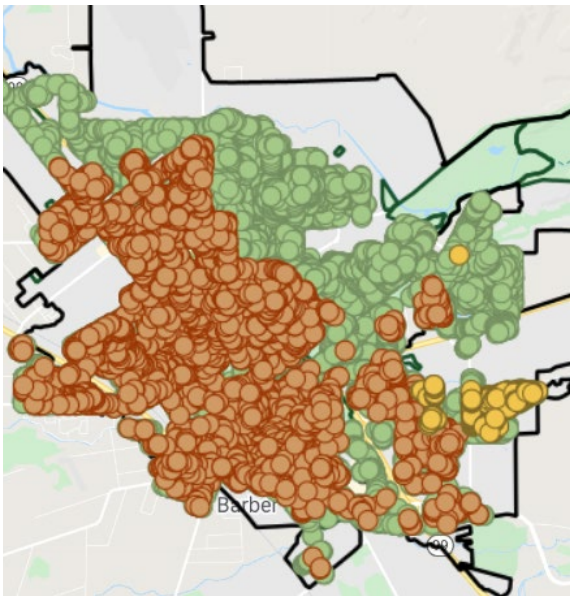
This meeting will clearly identify what we will be inventorying, any specific details that need to be made, and align our vision to your vision for the project. During the kickoff, we will review the objectives, deliverables, timeframe, and establish a communications strategy that allows us to communicate project status in your preferred medium. Given our robust history with CAL FIRE and our experience serving the needs of various California municipalities, we will present additional attribute considerations during this meeting as well.

Communication Strategy

In addition to determining the work sequence, we will also share a contact directory for our staff and yours. This will help us to define the best person(s) to contact if the need arises. It is our intent to be well prepared going into the contract so that your staff's day-to-day duties are not interrupted by our presence, and that this contract is a positive experience for everyone involved.

To ensure a good working relationship throughout the project, DRG collaborates with Watsonville early on to schedule fieldwork and meetings at mutually agreeable times and to determine protocols for addressing questions and concerns that arise during data collection. DRG's staff also stay in contact with Watsonville's staff during all phases of the project to keep the city informed of the project's status. The following is an example of an inventory progress update, e-mailed on a set schedule such as weekly or bi-weekly, from DRG's urban foresters to the client:

> Hello Richie,
>
> As of last Friday 33,751 sites have been collected, almost 89% of the total estimated sites. We are working in the central eastern section which will be wrapping up soon. There are some sections in the northwest that we will collect after this, and then we will be ready to start the parks.
>
> At this point, trees total 24,514, vacant sites total 8,634 and 603 tree stumps have been collected. Below is a screenshot of sites inventoried (yellow points are sites done last week), and a summary table as well. Quality control in the field is at 3% of the total sites collected (sheet attached). Additional desktop QC was done this week and last week.



Inventory Statistics				
Total Estimated Trees To Date	Estimated Completion Date	Total Remaining Trees	Percent Complete	Estimated Trees
33,751	7/5/20	4,249	88.8%	38,000
Quality Control				
Overall Critical Error Score	Target Critical Score	Overall Non-Critical Error Score	Target Non-Critical Score	Percent Audited
99.22%	98%	98.90%	95%	0.03

Data Mining and Software Programming

The next step in the inventory process is to obtain the GIS data and imagery needed to set up the field computers used for data collection. DRG's urban foresters typically work with the city's GIS or planning department to complete this step. If necessary, we can source imagery from other public sources. DRG uses the data fields defined in this proposal and the imagery, maps, and data files obtained from the city and various sources to program the data collection software and field computers.

Standard Data Collection

DRG typically begins data collection two weeks after the kick-off meeting, once the collection software has been created. At that time, we anticipate meeting with the City's identified staff to align our assessments with your expectations. Our experienced, qualified urban foresters locate trees, planting sites, and stumps and record the data specified by the city. We anticipate inventory collection areas to include rights-of-way, city easements, streets, parkways, medians, parks, city facilities, public parking lots, and other public lands as identified by city staff managing this project. The collected data, once finalized, forms Watsonville's tree inventory database.

Location Accuracy

DRG uses field computers and equipment that meet or exceed this project's location accuracy requirements. Having worked on thousands of tree inventory projects, DRG has found that using a combination of GIS and a customized data collection program provides the most exact data and the most efficient means for inventorying trees. DRG uses our in-house designed GIS software tool in conjunction with ruggedized computers with a GPS receiver to collect inventory data. Under favorable conditions, the equipment allows for sub-meter location accuracy of point data.

Individual Tree Inspection Process

During data collection, DRG's urban foresters complete a 360-degree inspection on each tree from the ground. Based on the conditions at the time of the inspection, DRG's staff identify the tree's species and its location, measure tree diameter, and rate its health. DRG's urban foresters also assess tree risk and suggest the specific maintenance involved in mitigating that risk as well as collecting all other information at this time. When data collection for an individual tree is complete, DRG's urban foresters walk to the next tree and follow the same steps, in the same order, to ensure consistent data collection.

DRG formally routes the collection of inventory data to ensure that staff collects all the sites in the project area in a systematic manner. Throughout the inventory process, DRG maps the streets, parks, and properties inventoried and shares that information with the city. DRG also informs Watsonville where our staff intends to collect data next. DRG's urban foresters collect data Monday through Friday and often on weekends with our clients' permission.

Upgrading the Inventory

In addition to collecting trees, planting sites, and stumps, DRG can inventory other infrastructures that Watsonville might be managing, such as: shrub rows, woodlots, natural or environmentally sensitive areas, irrigation boxes, benches, signage, and turf. DRG can upgrade the city's inventory by changing the current scope of work or by further developing the project to have additional phases.

Accessing Inventory Data

DRG supplies access to the tree inventory data during data collection.

i-Tree Eco Sample Inventory

In addition to collecting data on public trees, the City has expressed the intent of collecting tree data on residential trees and trees growing in wetlands/open space areas. DRG recommends the i-Tree Eco sample inventory approach for projects where it is not practical to inventory every tree in the study area. Within Watsonville's residential, wetlands/open space areas, DRG will collect and analyze specific tree data within random plots throughout the City. DEG will leverage our experience conducting i-Tree Eco studies across the United States and our industry-leading project management and quality assurance processes to ensure accurate and precise data collection and reporting.

Landowner Contact and Permission

Since the placement of the sample plot centers are randomly located throughout the subject area, many (and probably most) of the plot centers fall on private property. Therefore, it is of critical importance that attempts are made to contact landowners and inform them of the project and DRG's visits to their property.

Notification of the property owners by mail is a crucial step to generate the most interest and cooperation with the study. DRG will utilize accurate property owner contact data provided by the city to send letters explaining the nature of the project. Letters will be sent two times. Once a month or two prior to data collection, with a second mailing a couple of weeks before data collection begins. Mailings will be managed by DRG. DRG will work directly with the City to craft the landowner contact letter. Ideally, the letter will be submitted on City letterhead. Additionally, another action that has proven to be effective in enlisting property owner support is to provide local newspapers, radio stations, and television stations with a press release that provides a brief overview of the project. In our experience, property owners who are informed of the research before they receive the notification letter are much more likely to cooperate DRG will work hand-in-hand with the City to develop an appropriate press release. It is up to the City of Watsonville to distribute press releases to local contacts.

It is also important to notify local officials and community leaders of the project, project goals, and data collection efforts. DRG will provide Watsonville with a project synopsis and timeline that the City can communicate within its communication outlets. The synopsis will include several sample social media posts and attractive images to help leverage local community outreach efforts to inform residents of the project's efforts.

Lastly, when arriving on-site to collect data at a particular plot, DRG field staff will knock on residential or business doors at the plot location. If answered, DRG will provide a brief explanation of the project and secure verbal consent to access private property for data collection. If no answer is received, DRG will place a door-hanger on the residential or business door to inform residents or business owners of field-staff on-site and the purpose of the project. The door hanger will be designed and printed by DRG, with City's input.

While property owners will be encouraged to allow researchers access to their property the owners are also given the option to refuse access by calling a designated phone number. If the property owner calls the number and requests that their property not be used for the study, the plot and landowner contact information will be submitted to the City for any follow-up inquiries. If the property owner does not call the designated number, their permission to access the property is implied.

i-Tree Eco Data Collection

DRG's i-Tree Eco collection methodology will be performed in accordance with the explicit technical procedures outlined in the most recent i-Tree Eco manual (version 6). DRG will use the previous CAL FIRE data fields as well as our familiarity with the i-Tree Eco program to collect the specific data. The software will be loaded onto laptops or tablets compatible with the i-Tree Eco software, and will be configured for collecting as shown in the i-Tree Eco manual. Although similar to a regular tree inventory, DRG understands the necessary accuracy and understanding of the data collected through the i-Tree Eco process.

DRG will follow certain specification for data collection and will gather the following data:

- Plot identification number
- Crown width
- Current land use
- Percent of canopy this is missing
- Tree species (Latin and Common names)
- Dieback
- Trunk diameter measured at 4½ feet above grade
- Crown light exposure
- Height to live top
- Shortest distance to building
- Height to live crown base
- Current tree crown condition

Additional field data inputs will include:

- Land use
- Total tree height
- Percent ground cover

Quality Control and Assurance

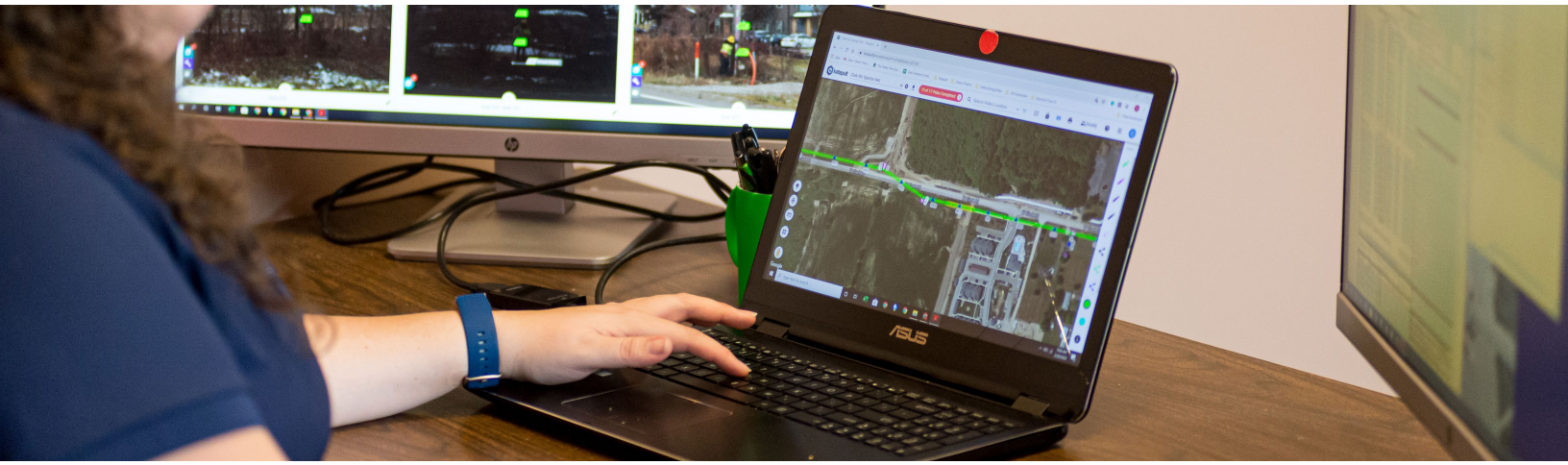
From the project's start to its finish, we are solely focused on your experience working with us, and your satisfaction with the quality of the project's deliverables. DRG takes measures to ensure accurate delivery of the collected data from the start. Before the inventory begins, DRG's project manager checks the field computers to make sure the computers are functioning properly. At the kick-off meeting, DRG reviews the project's work plan with the city, addresses any concerns that arise, and ensures that Watsonville and DRG's urban foresters are on the same page concerning the project's expectations.

Quality control and assurance continue during data collection. DRG's project manager and urban foresters use hot and cold data checks during fieldwork, and we encourage Watsonville to do so as well. DRG regularly updates Watsonville on the project's status and makes the city aware of any situations that may need immediate attention. At the end of the inventory portion of the project, DRG's IT specialists run computer diagnostics on the inventory data to make sure the data is clean. Finally, DRG answers any questions the city may have about the delivered data.

Tree Inventory Data Delivery

DRG will deliver the completed city tree inventory within the city's ESRI-compatible GIS tree inventory database within two weeks of data collection completion and final acceptance of the data by the city.

Additionally, for this project, Watsonville is eligible to receive tree inventory data in DRG's TreeKeeper® software. As part of our one-time software trial, DRG provides a one-year subscription to TreeKeeper® software to Watsonville free of charge. Information about the TreeKeeper system is in Appendix 7. We recognize the city is not asking for a software system at this time, but we feel the Treekeeper will provide value in managing your tree inventory management needs. We welcome the opportunity to provide a demonstration of TreeKeeper anytime, at your convenience.

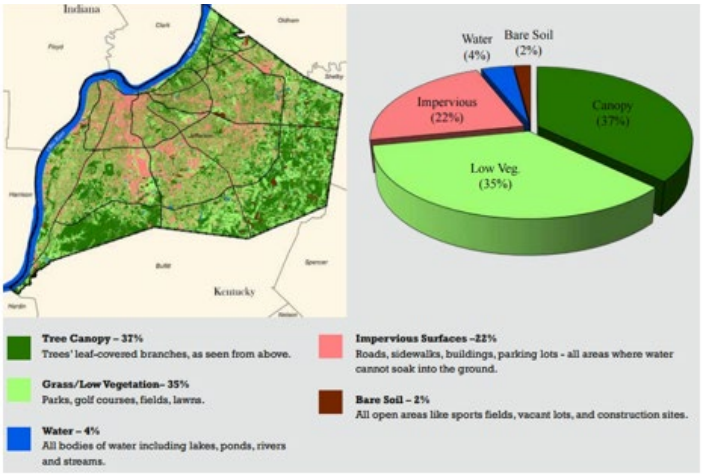


Canopy Mapping and Analysis

DRG will assess the current status of the city's urban forest and conduct analysis to support a determination for tree canopy goals within the city that meet goals for urban forest health, equity, and related watershed and community benefits.

Urban Tree Canopy and Land Cover Assessment

Vital information regarding urban forest structure and benefits can be developed using data from the up-to-date tree inventory. But this only provides information on the public trees. The US Forest Service estimates only 20% of the urban forest is made up of public trees. The majority of the urban forest consists of trees on private land and national and state forest lands. An Urban Tree Canopy (UTC) assessment considers all trees, both public and private, and can be obtained from the use of GIS and aerial imagery. Each of these analyses are important tools to help inform and guide the development of an UFMP. The images show an example of canopy cover calculated for each land cover type.



Assessment of the overall structure and function of the urban forest combines two analytical processes to achieve the best understanding of the urban forest qualities, quantities, and characteristics. The first process utilizes i-Tree software to analyze the inventory data collected to understand the urban forest resource structure within the City. The second process is a GIS analysis of the canopy cover to determine the distribution of trees across the city's communities, the benefits of the urban forest, and where planting trees will most benefit Watsonville.For the City of Watsonville, we recommend both an i-Tree Eco analysis of the updated tree inventory data and an UTC Assessment. Together they will provide comprehensive analysis and benchmarks for public and private tree canopy, including the health and the composition, and will serve as a guide to which areas and species will yield optimum returns. Additional considerations follow the i-Tree and UTC overview.

City Trees Inventory Assessment

Understanding the values that the urban forest brings to a community is an important step in developing an urban forest management plan. DRG uses i-Tree software to develop a comprehensive analysis of the composition and benefits provided by an urban forest. The I-Tree suite was developed by the United States Forest Service with the support of the International Society of Arboriculture, Society of Municipal Arborists, Arbor Day Foundation, Casey Tree, and The Davey Tree Expert Company (our parent company).

Utilized worldwide, i-Tree has provided a more scientific basis for managing trees within the urban forest for countless communities. i-Tree allows communities to understand the benefits that trees provide in simple, easy to understand ways. For this project, we propose the use of i-Tree *Eco* to clarify the value of the public tree inventory as a component of the overall urban forest.

DRG will use i-Tree *Eco* to create an expansive snapshot of the public tree inventory. It informs the condition of the urban forest allowing tree managers to develop a focus on the structure, function, and value of the trees in the community. That focus will be specifically on species composition and diversity, current condition, risk potential for invasive pests, primary environmental benefits, and management needs. i-Tree Eco will apply local hourly air pollution and meteorological data to improve the estimation of environmental benefits.

The i-Tree Eco analysis will provide the following information:

- Urban forest composition, including species composition and diversity, condition, and age distribution;
- Hourly amount of pollution removed by the urban and community forest and associated percent air quality improvement throughout a single year. Pollution removal is calculated for ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), and particulate matter <10 microns (PM10).
- Hourly urban and community forest volatile organic compound emissions and the relative impact of tree species on net ozone and carbon monoxide formation throughout the year.
- Total carbon stored and net carbon annually sequestered by the urban and community forest(s).
- Effects of trees on building energy use and consequent effects on carbon dioxide emissions from power plants.
- Compensatory value of the forest, as well as the value of air pollution removal and carbon storage and sequestration.
- Tree pollen allergen city index.
- Potential impact of pests and diseases such as Emerald Ash Borer and Oak Wilt.

Urban Forest Benefits Assessment

A UTC assessment is a tool to help urban and community forestry programs and communities better understand existing tree canopy cover and identify strategies to maximize the benefits provided by the future urban forest. It can also provide an important opportunity to bring community members together to develop a vision of the future urban canopy. A UTC is an easily understood measure of the community's overall success in meeting agreed upon canopy goals.

DRG will obtain the 2020 National Agricultural Imagery Program (NAIP) leaf-on 1-meter aerial digital imagery acquired by the U.S. Department of Agriculture to provide the most up-to-date land cover extraction. We utilize the NAIP 4-band orthoimagery on a majority of our past and current tree canopy projects, taking advantage of the near-infrared band for more accurate extraction. DRG also plans to use 2020 Nearmap imagery for additional reference.

The following provides specific information on each suggested category of analysis for the City of Watsonville:

Land Cover Metrics: Area and percentages of canopy cover will be calculated for each land cover type and designation (e.g., citywide, parks and open space, land use, zoning, improvement and redevelopment areas, neighborhood, subdivisions, watersheds, flood zones, etc.). This comparison of canopy cover with geography and land use will become a primary resource for recommendations and goals for Watsonville's community forest. Specific natural resource factors will be evaluated and prioritized to determine areas that provide multiple functions and benefits and should be considered a high priority for protection and preservation. In addition, this GIS layer can be used beyond the UTC Assessment in conjunction with existing GIS information to evaluate the relationship of the tree canopy to other assets and issues that may be of interest to the City.

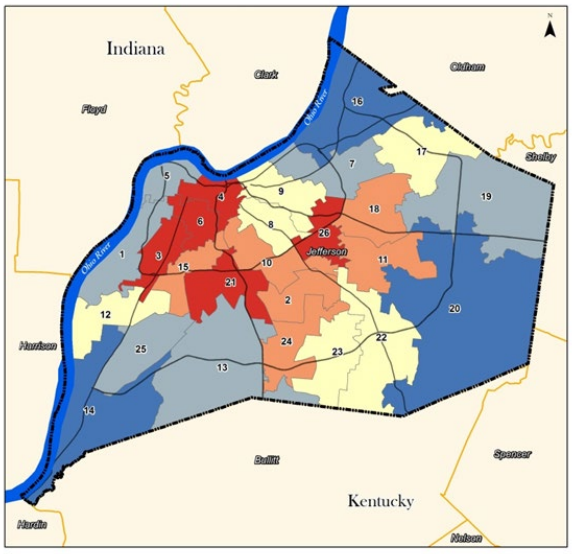
Ecosystem Services: Using the tree canopy area identified by the land cover analysis, ecosystem benefits for air quality, carbon, and stormwater will be assessed using i-Tree Software (i-Tree Canopy and i-Tree Hydro, specifically). Air quality values will consist of pounds of pollutants removed and a monetary value of those removed pollutants (carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), and particulate matter less than 10 microns (PM_{10}). Carbon storage and sequestration values will be reported in tons and monetary value. Stormwater values will be assessed using land cover percentages. Stormwater values will be reported as gallons of stormwater runoff avoided by tree canopy and a monetary value, which is assigned by multiplying the gallons of runoff avoided by the cost to treat a gallon of stormwater/wastewater. This does not measure pollution.

Social Equity and Resilience factors: DRG will provide analysis to explore the relationship between tree canopy cover and socio-demographic and economic data for the city. Census data from 2015 through 2019 will be aggregated for census tracts and/or blocks groups to determine trends and correlations with canopy cover. This data can be used by the City to prioritize tree planting and canopy goals. Typical analysis includes:

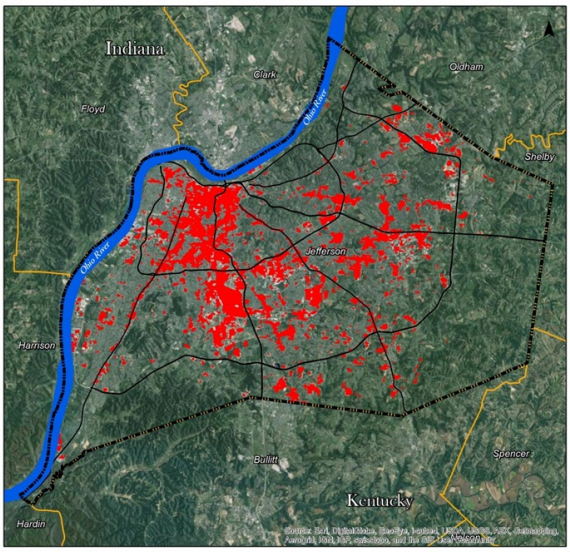
- Canopy % vs. median household income
- Canopy % vs. population density
- Canopy % vs. ethnicity
- Canopy % vs. age group
- Canopy % vs. education
- Canopy % vs. poverty rates/unemployment
- Canopy % vs. building value/age

Stormwater: Canopy data will be analyzed to determine the average reduction in stormwater runoff from trees within the city limits. This could be essential later on when determining water quality measures and setting goals focused on stream restoration or preservation. Estimated average annual pollutant runoff for total suspended solids, oxygen compounds, phosphorus, nitrogen, and other pollutants will be reported.

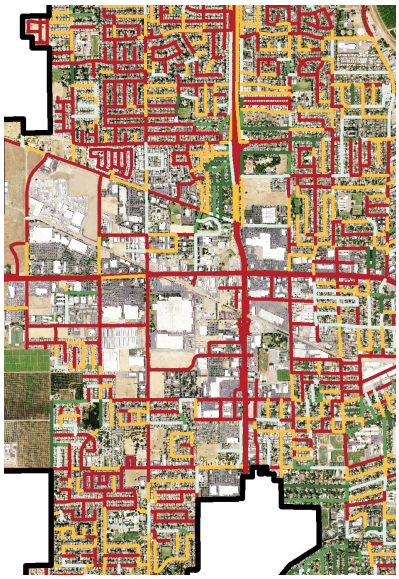
“Hot Spots” by Council District



Surface Temperature



Heat Islands Analysis: Capturing land surface temperature data is essential to monitoring heat islands, air quality, and overall well-being for residents. To establish an understanding of how urban tree canopy affects heat island, land surface temperature analysis conducted with Landsat 8 imagery during late afternoon summer conditions can be examined to determine the highest surface temperatures observed. Multiple years can be assessed to determine how heat islands have changed over time. Theoretically, this data would be correlated with areas of tree canopy reduction, but it could also lead insight to other factors not yet known.



Canopy Percent By Right-of-Way: Understanding Canopy Percent By Right-of-Way can help address equity factors for preservation and planting prioritization.DRG can offer macroscale qualitative analysis and recommendations that will help the City to maximize the potential of their related imagery data sets with respect to community concerns such as canopy cover within a ROW. The map on the right features the canopy percent by ROW analysis from the Yuba City, Caliofornia urban forest management plan.

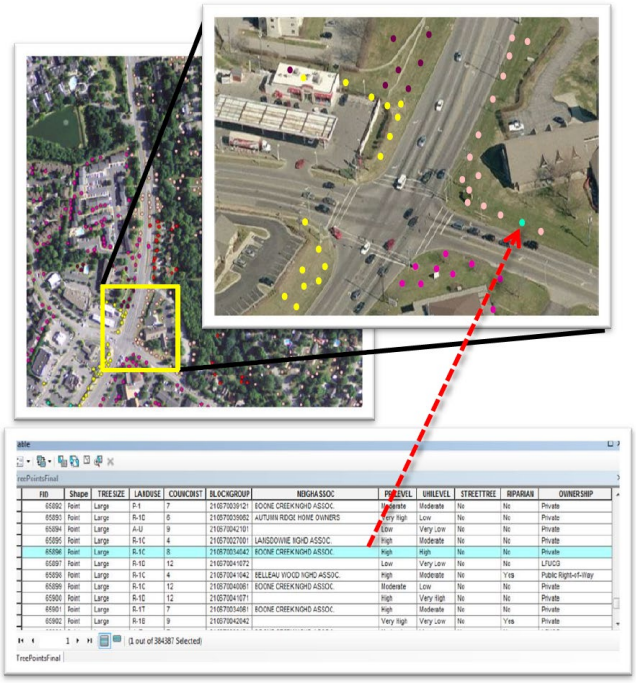
Priority Planting Index: DRG will determine areas that are biophysically feasible to support trees, estimate budget implications for tree planting to increase canopy, and account for the number of trees plantable by crown size. The index provides a basis for creating planting plans and prioritizing target areas to address key considerations, including canopy equity, environmental justice, greenhouse gas emissions, heat islands, canopy connectivity, erosion, and stormwater runoff. Additional considerations for determining planting sites may include council districts, human health data, a crime reduction strategy, or other GIS-based data that is available.

Priority Planting Analysis provides details specific to each planting location.

Canopy Goal Identification: With the results of the land cover assessment, the city will gain a clear understanding of its urban canopy resource. With input from the City’s Project Manager and internal/external city stakeholders, DRG will determine and recommend a canopy goal for the City of Watsonville to address climate adaptation, stormwater mediation, public health advancements, and other priority concerns.

Canopy Health Analysis

DRG will use satellite imagery of red and near-infrared bands to assess canopy health and areas of stress for the entire urban forest. Results of the analysis will identify tree canopy health as one of the following classes: Excellent, Very Good, Good, Fair, Poor, and Dead/Dying. The number of acres for each canopy health class will be tabulated. The results of this analysis can be used by Watsonville to further areas that are indicating canopy stress to find out the real cause of poor health (i.e., drought, disease, fire, dying trees, etc.).



TreeKeeper® Canopy Software

TreeKeeper® Canopy is a popular tool to empower communities to prioritize new planting locations for the greatest benefits. The software supports the identification of priority planting areas to address one or multiple priority concerns (e.g., heat islands, stormwater, canopy equity, etc.) and project future tree canopy benefits and estimate budgets for tree planting costs. The program uses data from the inventory, census tracts, public health, and environmental factors identified in the land cover analysis, and allows you to focus your planting projects based on parameters you set. The tool is simple to use and allows the user to explore a multitude of priority planting options to determine the estimated number of trees biophysically feasible to plant within the available planting space, calculate the number of small, medium, and large-stature trees for optimal coverage, and estimate planting and maintenance costs. This web solution has proven to be an insightful and engaging planning and public education tool for municipalities. For this item we have budgeted the TreeKeeper® Canopy software build and one year of subscription/support. Additional year subscriptions are addressed in the section budget sheet. This tool allows for a 3-step system of "observe, prioritize, and plant" to optimize future tree planting.

TreeKeeper® Canopy Example:

- Akron, OH (click to explore)

Observe

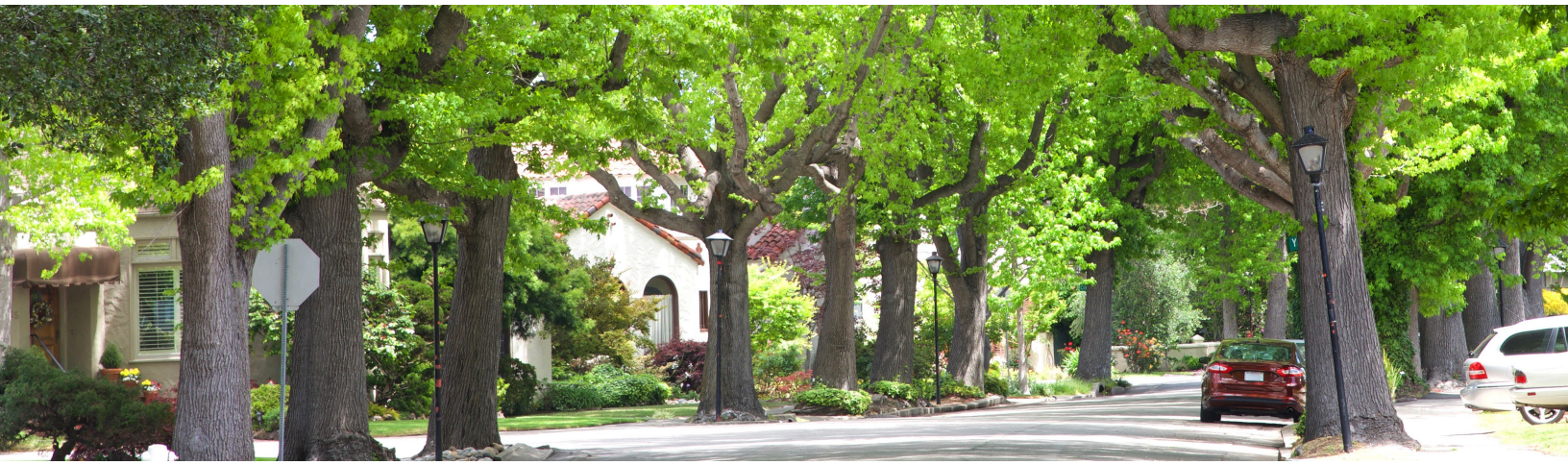
- Review tree canopy data
- Explore tree canopy changes
- Select between multiple layers
- Customizable attributes
- Determine planting opportunities

Prioritize

- Tree Preservation
- Integrate inventory data from TreeKeeper®
- Create strategies that work for you
- Customize the needs of the community
- Collaborate with other stakeholders
- Determine critical factors

Plant

- Set tree canopy goals
- Design and compare scenarios
- Project future tree canopy and benefits
- Calculate tree planting costs
- Export data for reporting



Urban Forestry Management Plan

UFMP Kickoff Meeting

DRG will conduct a second kickoff meeting to launch the UFMP portion of the project. The UFMP Kickoff Meeting provides the opportunity to review the project to date and to introduce key city staff to our team of UFMP development professionals. The focus of the meeting will address a review of the Scope of Work, desired deliverables, schedules, and clarify our approach for documenting and developing the UFMP. Within this meeting, we will address the timing of community engagement strategies and collaboration around the city's concurrent neighborhood tree planting efforts.

Overview

DRG's methodology for developing meaningful UFMPs is based on a proven science-based, community-driven process, and adaptive management. The plan will identify a fifty-year plan to enhance the urban forest through meaningful and achievable goals. Components of the plan will include an analysis of the current condition of the urban forest, including management methods and stakeholder opinions, as well as identification of long-term canopy goals.

The plan will also identify specific strategies for reaching long-term canopy goals. This includes tree care and maintenance best practices, recommendations for regular pruning cycles and pest control, yearly tree mitigation plantings, community involvement opportunities, related policies and procedures, and the development of a comprehensive tree species list for use for future tree plantings within the city.

During the development of the UFMP, DRG will conduct a review of the city's Historical Tree Ordinance, and other municipal codes, current tree care practices, policies, and procedures that guide the existing management of city trees. In the end, the plan will reflect the will of the community and will be written in a way to be understood by the average person. The UFMP will present a comprehensive set of actions and user-friendly guide for the city to achieve its goals.

Document Review

DRG's approach to evaluating city tree maintenance policies and regulations related to the urban forest begins with evaluating pertinent documents related to community planning, ordinance, pruning, tree planting, and tree removal policies. Our review and recommendations will address all departments related to public trees including budgets related to public trees and potential urban forestry funding sources and opportunities. With this information, we will provide a roadmap to update and align policies within all departments related to the planting and care of public trees.

We expect to utilize the following documents, but we are not limited to these and may explore additional documents as we conduct our research:

- City of Watsonville general plan
- City of Watsonville municipal code (tree and zone sections, historical tree preservation, landscape and planning sections, etc.)
- Guidelines for Developing and Evaluating Tree Ordinances (Swiecki, T.J., and Bernhardt, E.A. 2001).
- City of Watsonville updated public tree inventory
- City of Watsonville Urban Greening Plan
- City of Watsonville Urban Climate Plan
- City of Watsonville Local Hazard Mitigation Plan
- City of Watsonville Adopt-A-Trail program
- Planting, pruning, and tree removal specifications (internal and external)
- Guiding documents from the National Urban and Community Forestry Advisory Committee
- Guiding documents from the Sustainable Urban Forestry Coalition including the Vibrant Cities/Vibrant Communities Initiative
- Cal Green (California Green Building Standards Code)
- California Public Resources Code Section 4799.06 – 4799.12 (Urban Forestry Act of 1978)
- California Urban Forests Council: Urban Forests Master Plan Tool Kit
- AB 32 – California Greenhouse Gas Reduction/Climate Change Information (2006)
- Urban Forest Ecosystem Institute (UFEI)-SelecTree
- University of California Cooperative Extension ANR publications
- Various Solar/Photovoltaic/Tree Conflict legislation as it pertains to the urban forest
- Other documents that may impact the plan include those of the CPUC, Fire Codes, CalTrans, and CA Endangered Species Act.

Internal Stakeholder Interviews

A review of written documentation is only a portion of our research, we will also obtain lists and contact information for city staff, key supporters, elected officials, and other stakeholders that share an interest and/or responsibility for the urban forest. Having previously conducted many similar projects in the past, DRG has developed a methodology for this critically important task.

We develop our questions around the following items:

- Protocols and processes
- Use of available tools
- Reviewing procedures for development applications when trees are involved
- Projects and planning including Capital Improvement projects
- Ordinances that support and hinder the management and growth of the urban forest
- Conflict and cohesiveness that affects the urban forest and its stakeholders
- Gap analysis of leading urban forestry sustainability indicators

Our process includes developing a standard set of questions that will be asked during each interview. These questions do not preclude additional discussion that might be pertinent, but they do allow for consistency in research.

Recommendations

DRG will review and develop recommendations for objectives and action steps consistent with city goals and policies that provide for improvements in internal efficiencies, cost reductions, and limiting liability. Recommendations will also support and promote better communication and coordination among city departments that work within and adjacent to the urban forest (trees), decision-makers, and the community. Operational recommendations will be supported by Best Management Practices of the ISA, Tree Care Industry Association (TCIA), (of which Davey is a member) as well as the American National Standards Institute (ANSI).

Tree Maintenance Standards

DRG will review existing policies and practices for the care of city trees, including pruning, pruning cycles, pest management, tree planting, and tree removal. Community involvement opportunities will also be addressed. Recommendations will align city tree maintenance standards with community goals and priorities, internal stakeholder input, and city policies and Best Management Practices (BMPs) for tree care.

Tree Species List

The development and implementation of a street tree planting list and plan can direct future planting efforts by identifying species, spacing, and growth characteristics to maximize the shade canopy on streets, neighborhoods, and historic areas. Upon review of the city's tree inventory, canopy assessment analysis, and current street tree list, DRG will recommend a tree species list to reduce urban heat island effects and 1) are well adapted and long-lived 2) maximize tree biomass given each site's spatial constraints, 3) avoid over-reliance on any one species, and increase overall resilience and sustainability for the urban forest. In doing so we will identify which species have the potential to thrive are most suitable to the regional growing zone.

Tree Protection Ordinance

DRG will conduct a comprehensive review of the City's Historical Tree Ordinance and related municipal codes and robust community engagement to develop a comprehensive tree preservation ordinance that is consistent with the UFMP, the General Plan, the Urban Greening Plan, Climate Action Plan, and Green Infrastructure Plan. The plan will define the needs of a tree preservation ordinance, as well as monitoring/oversight responsibilities needed to effectively manage and maintain such an ordinance. This effort will include an analysis of tree protection policies that might be appropriate for the City of Watsonville and support for the City to determine the best language and structure for the tree preservation ordinance.

Community Engagement

DRG's philosophy of engagement embodies our goals and vision for what we do every day. We believe that the first "rule of engagement" is listening. We provide advice and commentary as experts, but our clients and their constituents have opinions and ideas that are paramount to the development of an UFMP. We also believe in preparedness prior to engaging communities. This means that we will have completed most of our research prior to the start of community outreach.

Typically, DRG would plan and facilitate a series of community open houses and workshops to provide an opportunity for the public to review the UFMP concepts and share their thoughts. Given the COVID-19 situation and State restrictions of inside public gatherings, DRG recommends 1. An robust online platform and communication strategy and 2. in-person outreach events that will only take place during outdoor gatherings.

Stakeholder Communication Method

DRG's facilitated stakeholder communication process will ensure that the City of Watsonville is providing an opportunity for a robust learning exchange among the diverse community perspectives, the city, and the project team. DRG will work with the city and its many community partners, including those identified in the CAL FIRE grant, to assist with community outreach efforts. Our communication approach will create pathways to welcome informed opinions about Watsonville's urban forest in a manner that is respectful of social distancing, yet focused on meeting people where they are. Our outreach approach is intended to engage residents as wells as city staff, businesses, real estate professionals, builders and landscape designers and others to incorporate their expertise and experience into the UFMP

Website

DRG will build a website specific to the Watsonville UFMP project. The website will serve as a landing page for the UFMP development process to communicate the results of the inventory and canopy study in simple terms and provide a forum for community input. From the project website, we will conduct a UFMP survey in both English and Spanish. The survey will include images for situational understanding, clarity, and comparison. In addition to email, messages and surveys can be constructed via text for individuals who do not have access to the internet.

DRG will also utilize the website platform for virtual community meetings. Comments made during the meetings will be transcribed and become part of the record for the Watsonville UFMP process.

EPA and EJ Website Integration

Another unique feature of our website is that it overlays mapping layers from the Environmental Protection Agency's (EPA) Environmental Justice (EJ) screening tool directly onto your participant maps to highlight engagement with both EJ communities and communities that have been historically disenfranchised. These layers represent the demographics of the residents in your community, including income, race, age, and linguistically isolated groups of people. Our approach to community engagement provides tools to understand both who was reached and who was engaged. DRG website analytics will ultimately help Watsonville understand its community stakeholders better in order to enable the city to stay connected while also remaining coordinated and culturally informed. DRG will develop and maintain the website throughout the community engagement and UFMP development process. Following project completion, DRG can provide options for maintaining the website, if desirable.

Online Survey

The City has requested surveys be conducted in Spanish and in English.DRG has experience conducting bilingual community engagement outreach, and our project website is adept at recognizing many languages. DRG will create a customized online survey to gauge the public perception of the community's urban forest and the management thereof. The survey will be available on the project website and can be linked through social media accounts and PSAs. The survey questions will be based on research findings and results of the inventory as well as key considerations for the UFMP and tree protection ordinance. DRG will develop the survey questions to impart useful information and engage meaningful public commentary. DRG will develop a report at the conclusion of the survey to highlight the community interests, common findings, and feedback.

No matter the language of choice being used, all responses are received and communicated in the same, equitable manner. Our website software also tracks the geographic area from where the response originated. With this, we can monitor community interest from across the city and document interest and comments in terms of council district, or other desirable matrices. All comments will be collected and presented to City staff, along with the summary.

Virtual Community Meetings

In collaboration with the City project team, DRG will develop the format and facilitate two virtual workshops to support the development of the UFMP and the tree protection ordinance. DRG will record the workshops and post on the project webpage so that residents can view and participate on their schedule. The webinar will include a link to the community survey so that participants can share comments outside of the live forum.

Roaming Pop-Ups

DRG will work with the city staff to determine appropriate venues/events to conduct additional community outreach across the city and including historically underrepresented communities. These pop-ups will build community awareness and encourage additional community participation in the development of theUFMP and tree protection ordinance. DRG will facilitate two days of informal community outreach using a "roaming popup" strategy. DRG staff will work with city staff to identify popular areas where residents gather. This might be the Farmer's Market, or a popular outdoor eatery or park.

The roaming pop-up events recognize and abide by all social distancing recommendations and requirements. During the pop-ups, friendly DRG staff will carry a handheld tablet and engage residents in conversation regarding the urban forest. When appropriate, staff will conduct the survey verbally while typing in the respondent's answers. For people interested in reviewing the data and research, we will distribute business cards with the QR code to the project website and survey. This strategy supports community involvement while keeping social distancing. DRG welcomes the opportunity to work with community partners such as the Watsonville Wetlands Watch to facilitate additional roaming pop-ups. DRG will develop a summary of findings from all the outreach efforts.

Analyzing the Research

Through the research, we will uncover issues that may include both opportunities and challenges within your urban forest. Issues such as inconsistencies in tree management, conflicts with stakeholder groups, awareness, and understanding of the urban forest by elected officials are common findings. Other challenges will be identified during the research and subsequent analysis. The challenges and opportunities that are identified during these processes will be addressed by recommendations for a more holistic approach to tree management and a detailed roadmap for "How do we get there."

Ultimately, the plan will identify goals and actions based on findings. This points to the final portion of the plan: developing a monitoring and measurement component to determine the effectiveness of the UFMP. This can be a methodical and simple follow-up with assignments for review on an annual basis. Our intent is not to deliver a plan that sits on a shelf and collects dust. Rather, we see the opportunity for Watsonville to leverage its local and interdepartmental partnerships to create a dynamic response to addressing the needs of the urban and community forest and community vision.

DRG will develop UFMP goals and standards that address issues related to all public and private trees. We will assess the overall condition of the urban and community forest, evaluate the impact of the city's planting efforts, and plan for the future of this valuable resource.

Implementation Recommendations

The process of developing the UFMP will likely reveal numerous opportunities to enhance the understanding of the urban forest resource as well as improve efficiency in tree maintenance operations, community participation, and other avenues to advance urban forest health and vitality. Within the UFMP, DRG will include implementation recommendations for achieving the desired tree canopy goals.

The recommendations will provide a straight-forward approach to prioritizing actions and expected timeframes, the identification of staff and/or departments that share leadership responsibility or ownership of the goal/action, the estimated investment, and strategies to measure progress.

Documentation Preparation and Deliverables

DRG is committed to delivering a UFMP that is dynamic and usable, incorporates tree management policy, and supports the vision and goals for the City of Watsonville. In preparing the document, DRG will analyze the data to determine strengths, gaps, and challenges. DRG will consider ISA BMPs and incorporate community culture to develop our recommendations to include in the plan. This is a highly collaborative process where the city and DRG will review the plans, goals, and recommendations developed. The development of the UFMP is designed in three stages to provide adequate review time (3-4 weeks) for city staff. The development of the UFMP will include two drafts and a final UFMP. The first draft and review process begins with the submission of what we refer to as a *95% complete draft.* This will be presented in the intended outline, but will be minimally formatted with a minimum of supporting images and graphs. Once the city provides feedback on the comprehensive draft and we've reached consensus on the final elements to be included in the plan, we transition to a second, 100% draft that is fully formatted.

The development of the Tree Protection Ordinance will follow a similar schedule and include a single draft of the proposed ordinance. Upon city, legal, and stakeholder review, DRG will provide a final formatted ordinance.

Upon final review from the City and stakeholders, the UFMP and Tree Protection Ordinance will be delivered as a final document for city and Council approval. With direction from City staff, DRG will develop and present an overview of the planning process, results, and final UFMP and the Tree Protection Ordinance to City Council.

Given public health concerns and the transition from in-person interaction to online collaboration, we currently envision the full utilization of the website to communicate the UPMP process. The website offers several advantages over print, such as an interactive platform, and links to relevant information useful to city residents. In utilizing the project website, the City of Watsonville will clearly understand participants' interest and commitment to advancing Watsonville urban forestry efforts.

Design

Our urban and community forest management plans are designed with a modern appearance and visually pleasing palette that includes a well-balanced combination of a narrative document, tables, images, and maps to share and convey the critical information necessary to achieve your objectives. The final draft of the UFMP will be provided in digital format, suitable for printing and virtual/web presentation

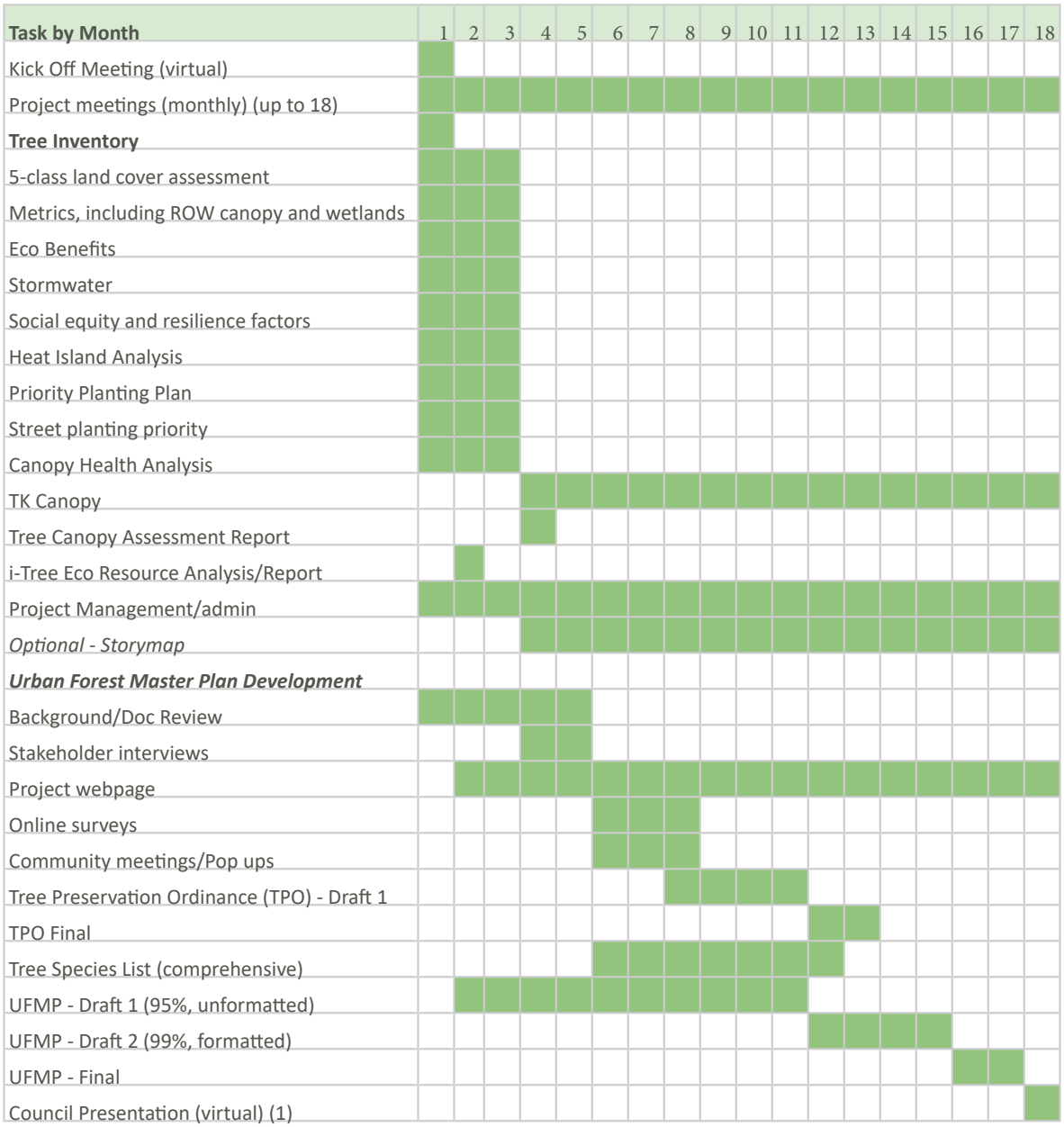
SECTION 4:

Project

PROJECT SCHEDULE

DRG understands the importance of timeliness and there are deadlines that coincide with the city's CAL FIRE grant. DRG has demonstrated experience conducting urban tree inventories, analyzing large datasets, and creating useful urban forestry management, master, and strategic plans. Our methodology is proven, and we can commit to meeting the city's desired deliverables within its expected timeframe.

We are prepared to begin work within fourteen (14) days after the contract has been awarded in April 2021. DRG will work with the city project manager to develop a firm timeline once the final scope of work has been determined and approved. Our proposed timeline is designed to be flexible and adaptive for optimal coordination and we are confident we have the ability to move this project forward in a timely basis to meet CAL FIRE grant requirements related to this project by September 30, 2023. The following project schedule lists key tasks along with expected completion dates and deliverables.



Concerns and Alternative Approaches

Virtual vs. onsite activities/presentations

One of the strengths of DRG is our approach to community engagement. We know that the urban forest is more than the management of land and trees; it is also about people. Perceptions and support, or lack of support, is often reflected in the vibrancy of a community urban forest. DRG understands the importance of public input and we enjoy gleaning the nuggets that tell the story of a community's interest and commitment to their urban forest. At the time of this proposal, we do not anticipate in-person meetings, with the exception of mobile pop ups. However, if public health recommendations change and in-person public meetings are acceptable, we welcome the opportunity to review our approach and make adjustments from virtual to onsite activities/presentations.

StoryMap

Davey Resource Group can capture and share Watsonville's urban forestry story in an effective and engaging visual presentation. A StoryMap is a digital-based fusion of text, data, and images tha details project findings and serves as a digital, interactive executive summary to the UFMP. Using StoryMap technology, Watsonville will have the means to showcase its existing resources and future vision for the urban forest to the community in a simplified manner that allows for understanding and learning.

StoryMap is a way to capture and share the details of the project process, such as the inventory results, UTC and community input beyond the timeline of the project. DRG will continue to host and provide access to Watsonville's StoryMap for as long as the City wants, and there are no annual costs beyond the initial setup.

StoryMap examples:

- Sammamish, WA (click to explore)
- Colorado, EAB Management Plan (click to explore)
- Puget Sound (click to explore)

Statement of Agreement / Insurance

DRG is able to satisfy all required documentation relevant to the contract as identified in section 6 of the RFP. Once we are notified of the award, DRG will update our city business license. DRG will secure all necessary documentation identified in Section 6 of the RFP. In addition, DRG has reviewed the contract provided within the RFP and has one request for change identified in Appendix 3.

Insurance

Davey Resource Group, Inc. and The Davey Tree Expert Company carry liability insurance for every project. Our insurance carriers are Marsh USA Inc. and Aon Risk Services Northeast, Inc. A copy of our general insurance is in Appendix 5. Certificates will be provided within ten (10) business days of contract award.

W9

Our 2021 W-9 is included in this proposal as Appendix 6.

Firm Profile

Firm History, Size and Structure

Davey Resource Group, Inc. is a wholly owned subsidiary of The Davey Tree Expert Company. The Davey Tree Expert Company was established in 1880 as a family business, incorporated in Ohio in 1909, and was purchased by its employees in 1978. Davey Resource Group was established in 1992 out of a growing need for science-based management of the urban forest. Davey Resource Group was incorporated on June 19, 2017. As stated previously, The Davey Tree Expert Company employs over 10,000 people, and is recognized as the ninth largest employee-owned company in the country.

Business Acumen

Davey Resource Group understands the importance of serving our clients with integrity and quality. We subscribe to an internal strategy of QTC: Quality, Teamwork, and Communication. This initiative is embraced within our teams. As we work under this umbrella with one another, we also share this strategy with our clients.

Engagement and Service Philosophy

The most important component of the services we provide is our relationship with our clients. We do this through our people. Our business philosophy embodies our goals and visions. We keep our employee-owners engaged through interesting projects and growth opportunities and allow their ideas to help drive our business. Our team understands and embraces QTC, and as a team, we deliver quality projects.

We believe that the first "rule of engagement" is listening. We provide advice and commentary as experts, and our clients and their constituents have opinions and ideas that help us grow as a company. We also believe in preparedness prior to every project. This means that we will have met with you prior to the data collection and everyone involved is clear about the project priorities and approach. It is our intent to craft this project in a manner that is enjoyable and satisfying for everyone involved.

Communication

We understand this critical component of every project and diligent, respectful communication is embodied in our day-to-day work philosophy. Davey Resource Group provides multiple layers of communication. We endeavor to return phone calls within 24 hours. Our communications goal is to have City staff be well informed so that there are no issues, concerns, or complaints.

Resources

Davey Resource Group has all the resources available to complete a municipal tree inventory and an urban forestry management plan for the City of Watsonville on a timely basis and within your budget. Our inventory collection team is organized, well versed in the identified collection attributes, and understands the need for accuracy and consistency in their work. Our Management Plan team has produced the most desirable management plans in the nation. Every member of the team maintains the highest levels of industry certification. Every team member is orientated to and fully dedicated to your project. Each person given to your project has the tools and support they need to ensure the quality and completion of your project.

Field Safety

Davey Resource Group takes safety very seriously. Our safety program is administered by a dedicated safety department at our corporate headquarters in Kent, Ohio. In addition, portions of this program are delivered to field staff in our weekly tailgates, our internal newsletter, and weekly safety text messages to all team members. Each inventory arborist wears a hardhat and a safety vest while in the field that identifies them as a contractor with Davey Resource Group. The field collection team serving Watsonville will professionally represent Davey and the City and uphold safety standards at all times.

Financial Stability Capacity and Resources

Davey Resource Group and our parent company, The Davey Tree Expert Company, have no financial issues. We are a solvent, employee-owned business. We present the necessary facilities, ability, experience, and financial resources to provide the services specified within this proposal. Our presence and unified teams strategically situated throughout the country provide the capacity for Davey Resource Group to support several inventory collections, urban forestry master plans, canopy analyses, tree ordinance preparation projects, etc., simultaneously. Our resources are sound. Our financial stability, national presence, capacity, personnel, client focus, and reputation for first-rate work are many of the attributes our clients appreciate. We have the means to complete the jobs we start, on time and within budget.

Substitution/Additional Staff

DRG does not anticipate the need for staff substitutions. However, if circumstances present the need to add or substitute staff any time during the project process, Davey Resource Group has the means to assign additional inventory arborists from its pool of professional arborists to meet the schedule expectations of the City of Watsonville. DRG has over 600 qualified ISA certified arborists based throughout the United States and Canada. Many of our projects are turn-key in nature and allow us the flexibility to temporarily re-assign staff to Watsonville as needed to meet project deadlines. If for any reason staff adjustment is needed, DRG will provide bios and seek approval from the City prior to placing personnel on this project.

References

Please refer to the Experience section, page 12, for a list of references with contact information.

Cost Proposal

City Tree Inventory and Urban Forestry Master Plan as presented in this proposal:

- Inventorying 6,000 City Trees
- Develop Tree Species List
- Project Specific Website
- Monthly Status Updates (calls)
- Tree Protection Ordinance Update
- Operations Review
- Robust Community Engagement

Cost Task and Total Cost

	Task	Hours	Task Budget	Total Budget
1	Inventory 6,000 City trees (14 days of collection)	362		$35,009
	Project Kick Off and Collection Software Development	46	$3,790	
	Inventory	290	$29,119	
	Quality Control and Data Delivery	26	$2,100	
2	Tree Canopy Analysis	589		$43,635
	5-class land cover assessment		$4,530	
	Metrics, including ROW canopy and wetlands		$1,765	
	Eco Benefits		$1,585	
	Stormwater		$1,765	
	Social equity and resilience factors		$3,353	
	Heat Island Analysis		$3,235	
	Priority Planting Index		$3,355	
	Street planting priority		$588	
	Canopy Health Analysis		$1,473	
	Report Maps		$1,765	
	TK Canopy (includes build and 1st year support)		$6,471	
	Tree Canopy Assessment Report		$5,700	
	i-Tree Eco Resource Analysis/Report - city-managed trees		$6,050	
	Project Management/admin		$2,000	
	Optional			$8,993
	Optional - TK Canopy Training (2 hrs)		$588	
	Optional - Storymap		$8,405	
3	Tree Preservation Ordinance	84		$8,580.00
	Draft 1 TPO		$6,060	
	TPO Final		$2,520	

4	Urban Forest Master (Management) Plan (UFMP)	536		$52,570
	Kick Off Meeting (virtual)		$1,640	
	Background/Doc Review (policies, regulations, plans)		$7,600	
	Internal/Managing Stakeholder Interviews (virtual) (up to 10)		$4,660	
	Project meetings (monthly) (up to 18)		$7,380	
	Tree Species List (comprehensive)		$3,800	
	UFMP - Draft 1 (95%, unformatted)		$12,500	
	UFMP - Draft 2 (99%, formatted)		$5,800	
	UFMP - Final		$3,280	
	Design and Layout		$3,150	
	Project management/admin		$1,000	
	Council Presentation (virtual) (1)		$1,760	
	Optional			$293
	Optional - onsite Council Presentation		$293	
5	Community Outreach and Engagement	208		$25,740
	Project Landing Page (webpage) - 18 months		$3,800	
	Publicinput.com - 18 months		$5,020	
	Online Survey (2) (English/Spanish)		$3,800	
	Community Meetings - virtual/interactive and recorded for webpage		-	
	1 - Tree Protection Ordinance (2 staff)		$2,520	
	1 - 50 year UFMP (2 staff)		$2,520	
	External Stakeholder Interviews (virtual) (up to 5)		$2,900	
	Pop Ups - 2 Days		$3,180	
	Project management/admin		$2,000	
	Optional			$1,344
	Optional - Community Meeting onsite - Ordinance		$672	
	Optional - Community Meeting onsite- UFMP		$672	
Total (without options)				**$165,534**
6	New and modified scope	991		$92,500
	i-Tree Eco Sample Plot Collection	852	$77,490	
	Mailings/Notifications	52	$5,555	
	i-Tree Eco Resource Analysis/Report - wetlands and private parcels (2 distinctions)	79	$7,975	
	Tree planting pop ups (2) (consecutive to Farmers Market, Fri/Sat)	8	$1,480	
Total (including all options)				**$268,664**

Personnel Billing Rates/Hours

Name	Team Position	Billing Rate ($/hr)	Expected Hours
Emily Spillett	NorCal Area Manager	$135.00	16
Tina McKeand	Sr. Project Manager	$125.00	166
Elizabeth Lanham	Project Manager	$95.00	40
Will Ayersman	GIS Project Manager	$125.00	12
Allison Serafin Steere	Sr. Associate Consultant	$95.00	300
Holly Knox	Inventory Field Software Support Coordinator	$95.00	23
Rachel Sitz	Associate Consultant, Entomology/ Plant Pathology	$95.00	270
Dan Jackman	Inventory Arborist	$85.00	174
Brenda Wong	Inventory Arborist	$85.00	142
GIS Analysts	GIS Technician and Senior Geospatial Analyst	$45.00	430

SECTION 5:

Appendix

APPENDIX 1: ATTRIBUTES FOR TREE INVENTORY

Attributes for the City of Watsonville CAL FIRE funded Tree Inventory

The following attributes will be collected for the City of Watsonville by DRG. They adhere with CAL FIRE Urban & Community Forestry 19/20 California Climate Investment Grant Guidelines

- **Mapping coordinate.** X and Y coordinate locations (latitude and longitude). Each tree and planting site will be located using GIS and/or GPS equipment.
- **Block side.** The location of each street tree and planting site so that they can easily be identified for future work. Street trees and planting sites will be located using a street name, side of lot, tree number, and block side information (on street, from street, and to street).
- **Location.** The tree's physical location in relation to public Right of Way and/or public space will be recorded.
- **Species.** Trees will be identified by *genus* and *species,* and by common name.
- **Diameter.** Tree trunk diameter will be recorded. This should be to the nearest 1-inch.
- **Stems.** The number of stems a tree has will be recorded.
- **Condition.** In general, the condition of each tree will be recorded in one of the following categories adapted from the rating system established by the International Society of Arboriculture:

Excellent	100%
Very Good	90%
Good	80%
Fair	60%
Poor	40%
Critical	20%
Dead	0%

- **Maintenance need.** The following maintenance categories (*or similar approved by CAL FIRE prior to collection*) will be collected:
  1. Priority 1 Removal. Trees designated for removal have defects that cannot be cost-effectively or practically treated. Most of the trees in this category will have a large percentage of dead crown, and pose an elevated level of risk for failure. Any hazards that could be potential dangers to persons or property and seen as potential liabilities would be in this category. Large dead and dying trees that are high liability risks are included in this category. These trees are the first ones that should be removed.

2. Priority 2 Removal. Trees that should be removed but do not pose a liability as great as the first-priority will be identified here. This category would need attention as soon as "Priority One" trees are removed.
3. Priority 3 Removal. Trees that should be removed, but that pose minimal liability to persons or property, will be identified in this category.
4. Priority 1 Prune. Trees that require priority one pruning are recommended for trimming to remove hazardous deadwood, hangers, or broken branches. These trees have broken or hanging limbs, hazardous deadwood, and dead, dying, or diseased limbs or leaders greater than four inches in diameter.
5. Priority 2 Prune. These trees have dead, dying, diseased, or weakened branches between two and four inches in diameter and are potential safety hazards.
6. Large Tree Routine Prune. These trees require routine horticultural pruning to correct structural problems or growth patterns, which would eventually obstruct traffic or interfere with utility wires or buildings. Trees in this category are large enough to require bucket truck access or manual climbing.
7. Small Tree Routine Prune. These trees require routine horticultural pruning to correct structural problems or growth patterns, which would eventually obstruct traffic or interfere with utility wires or buildings. These trees are small growing, mature trees that can be evaluated and pruned from the ground.
8. Training Prune. Young, large-growing trees that are still small must be pruned to correct or eliminate weak, interfering, or objectionable branches to minimize future maintenance requirements. These trees, up to 20 feet in height, can be worked with a pole-pruner by a person standing on the ground.
9. Stump Removal. This category indicates a stump that should be removed.
10. Plant Tree. During the inventory, vacant planting sites will be identified by street and address. The size of the site is designated as small, medium, or large (indicating the ultimate size that the tree will attain), depending on the growing space available and the presence of overhead wires.

- **Clearance Required.** Trees, which are causing or may cause visibility or clearance difficulties for pedestrians or vehicles, will be identified, as well as those trees blocking clear visibility of signs or traffic signals.

- **Hardscape Damage.** Damage to sidewalks and curbs by tree roots are noted. Notes on potential fixes for the problem are encouraged (redesign options etc.…)

- **Overhead Utilities.** The inventory indicates whether overhead conductors or other utilities are present at the tree site that could result in conflicts with the tree.

- **Grow space.** The area within the growing space is categorized as:
  - **T** Tree Lawn
  - **W** Well/Pit
  - **M** Median
  - **P** Raised Planter
  - **O** Open/Unrestricted
  - **I** Island
  - **U** Unmaintained Area

Space Size. The narrowest dimension of the Grow Space, in feet. (I.e., 3'x3' cut-out, 4' parkway strip, open parkland, etc.).

Notes. Additional information regarding disease, insect, mechanical damage, etc. can be included in this field.

- **Space Size.** The narrowest dimension of the Grow Space, in feet. (I.e., 3'x3' cut-out, 4' parkway strip, open parkland, etc.).

- **Notes.** Additional information regarding disease, insect, mechanical damage, etc. can be included in this field.

APPENDIX 2: DRG UTC PROJECTS 2015-2020

Project Location	Project Type	Square Miles	Change Analysis (CA), Socio-Economics (SE), Tree Canopy Metrics (M), Ecosystem Benefits (EB), Priority Planting Analysis (PP)	Year
Puget Sound UGA, WA (77 Communities)	UTC Mapping/Analysis	769	SE, M, PP	2020
Syracuse, IN	UTC Mapping/Analysis	2	M, EB, PP	2020
Sturgis, MI	UTC Mapping/Analysis	6	M, EB, PP	2020
Middlebury, IN	UTC Mapping/Analysis	5	M, EB, PP	2020
Colwater, MI	UTC Mapping/Analysis	9	M, EB, PP	2020
Buchanan, MI	UTC Mapping/Analysis	3	M, EB, PP	2020
Angola, IN	UTC Mapping/Analysis	6	M, EB, PP	2020
Corinth, MS	UTC Mapping/Analysis/Hyperspectral	30	M, EB, PP	2019
Florence, AL	UTC Mapping/Analysis/Hyperspectral	27	M, EB, PP	2019
Gasden, AL	UTC Mapping/Analysis/Hyperspectral	38	M, EB, PP	2019
Olive Branch, MS	UTC Mapping/Analysis/Hyperspectral	37	M, EB, PP	2019
Scottsboro, AL	UTC Mapping/Analysis/Hyperspectral	57	M, EB, PP	2019
Tupelo, MS	UTC Mapping/Analysis/Hyperspectral	51	M, EB, PP	2019
Yuba CIty, CA	UTC Mapping/Analysis/Master Plan	15	M, EB, PP	2019
Somerville, MA	UTC Mapping/Analysis	4	M, EB, PP	2019
Oakland, CA	UTC Mapping/Analysis/Master Plan	78	M, EB, PP	2019
Miami Beach, FL	UTC Mapping/Analysis/Master Plan	8	M, EB, PP	2019
Lancaster, PA	UTC Mapping/Analysis	7	M, EB, PP	2019
Garden Grove, CA	UTC Mapping/Analysis/Master Plan	18	M, EB, PP	2019
Asheville, NC	UTC Mapping/Analysis	46	CA, M, EB	2019
Akron, OH	UTC Mapping/Analysis	62	CA, SE, M, EB, PP	2019
Kansas City, MO	UTC Mapping/Analysis/Master Plan	319	M, EB, PP	2018
Traverse City, MI	UTC Mapping/Analysis	7	M, EB, PP	2018
Oklahoma City, OK	UTC Mapping/Analysis	540	M, EB, PP	2018
Merced, CA	UTC Mapping/Analysis/Master Plan	23	M, EB, PP	2018
Anchorage, AK	UTC Mapping/Analysis	105	CA,M	2018
Tracy, CA	UTC Mapping/Analysis/Master Plan	23	SE, M, EB, PP	2018
South San Francisco, CA	UTC Mapping/Analysis/Master Plan	10	M, EB, PP	2018
Sammamish, WA	UTC Mapping/Analysis/Master Plan	19	CA, SE, M, EB, PP	2018
Tallahassee, FL	UTC Mapping/Analysis/Master Plan	103	CA, SE, M, EB, PP	2017
St. Clair County, IL	UTC Mapping/Analysis	674	M, EB, PP	2017
Madison County, IL	UTC Mapping/Analysis	741	M, EB, PP	2017
Arlington County, VA	UTC Mapping/Analysis	26	CA, M, EB	2017
Bellaire, MI	UTC Mapping/Analysis	2	M, EB, PP	2017

Elk Rapids, MI	UTC Mapping/Analysis	2	M, EB, PP	2017
Kalakaska, MI	UTC Mapping/Analysis	3	M, EB, PP	2017
Kingsley, MI	UTC Mapping/Analysis	1	M, EB, PP	2017
Northport, MI	UTC Mapping/Analysis	2	M, EB, PP	2017
Columbia, MO	UTC Mapping/Analysis/Master Plan	64	CA, SE, M, EB, PP	2017
Edmonds, WA	UTC Mapping/Analysis/Master Plan	18	CA, SE, M, EB, PP	2017
Patterson, CA	UTC Mapping/Analysis/Master Plan	6	M, EB, PP	2017
East Lansing, MI	UTC Mapping/Analysis	14	M, EB, PP	2017
Sacramento, CA	UTC Mapping/Analysis/Master Plan	100	CA, SE, M, EB, PP	2017
Columbia City, IN	UTC Mapping/Analysis	6	M, EB, PP	2017
Lawrenceburg, IN	UTC Mapping/Analysis	6	M, EB, PP	2017
Woodland, CA	UTC Mapping/Analysis/Master Plan	16	CA, SE, M, EB, PP	2017
Ferrysburg, MI	UTC Mapping/Analysis	4	M, EB, PP	2017
Grandville, MI	UTC Mapping/Analysis	8	M, EB, PP	2017
Hudsonville, MI	UTC Mapping/Analysis	4	M, EB, PP	2017
Sparta, MI	UTC Mapping/Analysis	2	M, EB, PP	2017
Tulsa County, OK	UTC Mapping/Analysis/Master Plan	587	CA, SE, M, EB, PP	2016
Golden, CO	UTC Mapping/Analysis	10	M, EB, PP	2016
Plano, TX	UTC Mapping/Analysis/Master Plan	72	M, EB, PP	2016
Atwater, CA	UTC Mapping/Analysis/Master Plan	7	M, EB, PP	2016
Ferndale, MI	UTC Mapping/Analysis	4	M, EB, PP	2016
Kendallville, IN	UTC Mapping/Analysis	7	M, EB, PP	2016
Greensboro, MD	UTC Mapping/Analysis/Master Plan	2	CA, M, EB, PP	2016
Citrus Heights, CA	UTC Mapping/Analysis/Master Plan	15	M, EB, PP	2015
Largo, FL	UTC Mapping/Analysis/Master Plan	20	, M, EB, PP	2015
Pacific Grove, CA	UTC Mapping/Analysis/Master Plan	4	CA, M, EB, PP	2015
Oakland, CA	UTC Mapping/Analysis	78	SE, M, EB, PP	2015
AuGres, MI	UTC Mapping/Analysis	2	M, EB, PP	2015
Standish, MI	UTC Mapping/Analysis	2	M, EB, PP	2015

APPENDIX 3: DRG'S LIMITED WARRANTY

The Davey Tree Expert Company, its divisions, agents, representatives, operations, and subsidiaries (collectively "Davey") provides this Limited Warranty as a condition of providing the services outlined in the agreement between the parties, including any bids, orders, contracts, or understandings between the parties (collectively the "Services").

Davey provides the Services utilizing applicable standard industry practices and based on the facts and conditions known at the point in time the Services are performed. Facts and conditions related to the subject of the Services may change over time. Davey cannot predict or determine developments concerning the subject of the Services and will not be liable for any developments, changes, or conditions that occur, including, but not limited to, decay or damage by the elements, persons or implements, insect infestation, deterioration, conditions not discoverable using the means and methods used to perform the Services, or acts of God or nature or otherwise. If a visual inspection is utilized, visual inspection does not include aerial or subterranean inspection, testing, or analysis. Davey will not be liable for the discovery or identification of non-visually observable, latent, dormant, or hidden conditions or hazards, and does not guarantee that items will be healthy or safe under all circumstances or for a specified period of time, or that remedial treatments will remedy a defect or condition.

Davey may have reviewed publicly available or other third-party records or conducted interviews, and has assumed the genuineness of such documents and statements. Davey disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any information obtained from any third-party or publicly available source.

To the extent permitted by law, Davey does not make and expressly disclaims any warranties or representations of any kind, express or implied, with respect to completeness, accuracy, or current nature of the information contained in the Services or the reports or findings resulting therefrom beyond that expressly contracted for by Davey in the agreements between the parties, including but not limited to, performing diagnosis or identifying hazards or conditions not within the scope of the Services or not readily discoverable using applicable standard industry practices. Davey disclaims any warranty of fitness for any particular purpose. Davey's warranty is limited to one year from the date Services are performed. Davey's liability for any claim, damage, or loss, whether direct, indirect, special, consequential, or otherwise, caused by or related to the Services shall be limited to the Services expressly contracted to be performed by Davey.

APPENDIX 4: INSURANCE EXAMPLE

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 08/27/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh USA Inc. 200 Public Square, Suite 3760 Cleveland, OH 44114-1824 Attn: Cleveland.CertRequest@marsh.com RESOU Klucza	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED Davey Resource Group, Inc. 295 S. Water Street, Suite 300 Kent, OH 44240	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Old Republic Insurance Company — 24147 INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** CLE-006543312-04 **REVISION NUMBER:** 11

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			MWZY 314042 20	09/01/2020	09/01/2021	EACH OCCURRENCE	$ 5,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 5,000,000
							MED EXP (Any one person)	$ 25,000
							PERSONAL & ADV INJURY	$ 5,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 5,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 5,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY			MWTB 314041 20	09/01/2020	09/01/2021	COMBINED SINGLE LIMIT (Ea accident)	$ 5,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N — N / A If yes, describe under DESCRIPTION OF OPERATIONS below			MWC 314040 20 (AOS)	09/01/2020	09/01/2021	X PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$ 5,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 5,000,000
							E.L. DISEASE - POLICY LIMIT	$ 5,000,000
A	EXCESS WORKERS COMPENSATION			MWXS 314043 20 (CA, OH, PA, NC, WA) EXCESS OF $5,000,000 SIR	09/01/2020	09/01/2021	WORKERS COMPENSATION EMPLOYERS LIABILITY	STATUTORY 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Evidence of Coverage

CERTIFICATE HOLDER	CANCELLATION
*Davey Resource Group, Inc. 295 S. Water Street, Suite 300 Kent, OH 44240	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE of Marsh USA Inc. Manashi Mukherjee Manashi Mukherjee

AGENCY CUSTOMER ID: CN101565730
LOC #: Cleveland

ACORD®

ADDITIONAL REMARKS SCHEDULE

Page 2 of 2

AGENCY	NAMED INSURED
Marsh USA Inc.	Davey Resource Group, Inc. 295 S. Water Street, Suite 300 Kent, OH 44240
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

Workers Compensation does not apply in MN. Coverage is obtained from Workers Compensation reinsurance association (W.C.R.A.) as required by the state. Minnesota Employers Liability is covered by policy number MWC 314040 20.

EXHIBIT "B"

SCHEDULE OF PERFORMANCE

Services shall commence within fourteen (14) days after execution of this Contract. All services performed under the provisions of this Contract shall be completed in accordance with the following schedule:

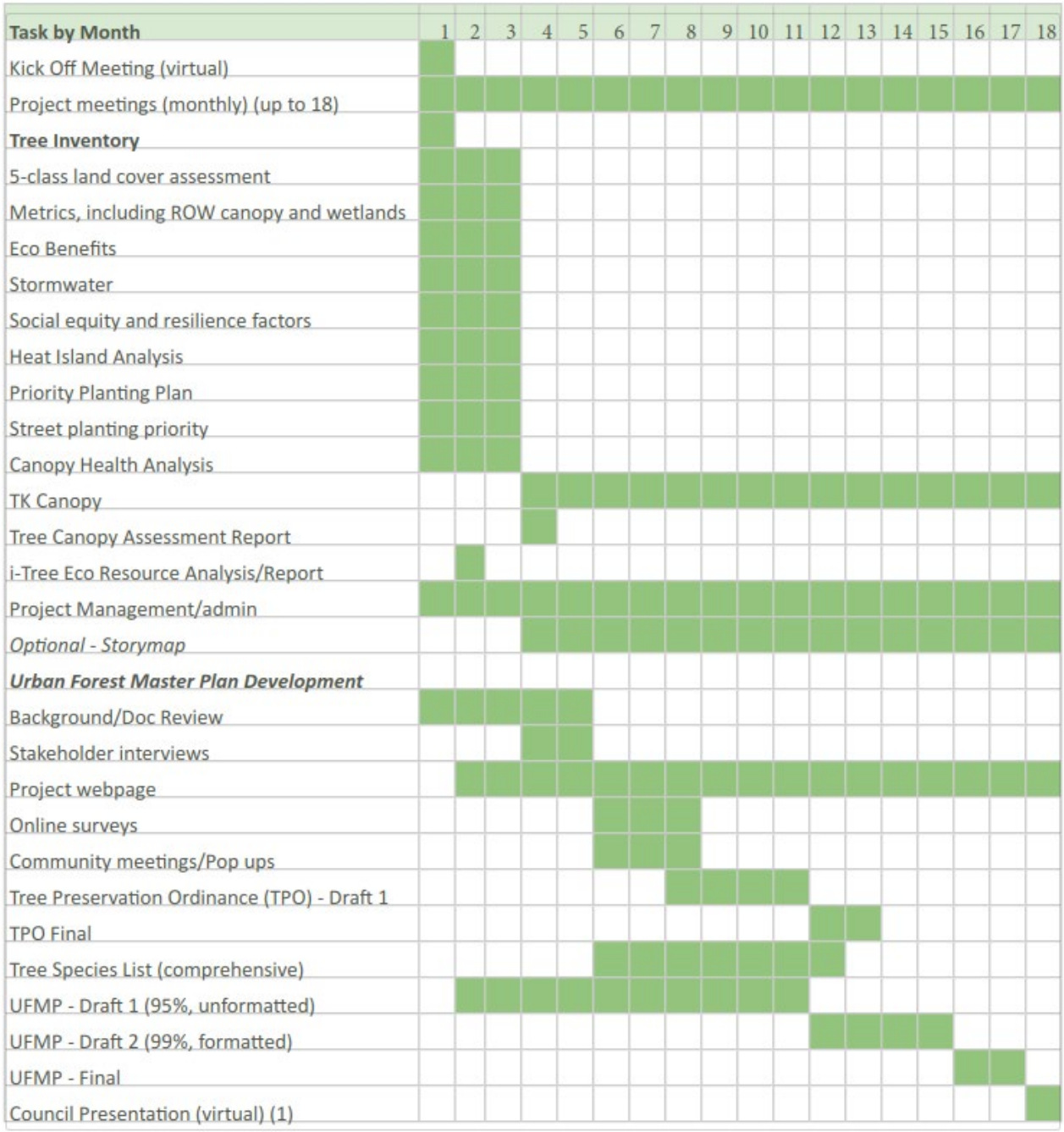


EXHIBIT “C”

COMPENSATION

a. Total Compensation. The total obligation of City under this Contract shall not exceed $268,664.00.

b. Basis for Payment. Payment(s) to Consultant for services performed under this Contract shall be made as follows and shall not include payment for reimbursable expenses:

Cost Task and Total Cost

	Task	Hours	Task Budget	Total Budget
1	Inventory 6,000 City trees (14 days of collection)	362		$35,009
	Project Kick Off and Collection Software Development	46	$3,790	
	Inventory	290	$29,119	
	Quality Control and Data Delivery	26	$2,100	
2	Tree Canopy Analysis	589		$43,635
	5-class land cover assessment		$4,530	
	Metrics, including ROW canopy and wetlands		$1,765	
	Eco Benefits		$1,585	
	Stormwater		$1,765	
	Social equity and resilience factors		$3,353	
	Heat Island Analysis		$3,235	
	Priority Planting Index		$3,355	
	Street planting priority		$588	
	Canopy Health Analysis		$1,473	
	Report Maps		$1,765	
	TK Canopy (includes build and 1st year support)		$6,471	
	Tree Canopy Assessment Report		$5,700	
	i-Tree Eco Resource Analysis/Report - city-managed trees		$6,050	
	Project Management/admin		$2,000	
	Optional			$8,993
	Optional - TK Canopy Training (2 hrs)		$588	
	Optional - Storymap		$8,405	
3	Tree Preservation Ordinance	84		$8,580.00
	Draft 1 TPO		$6,060	
	TPO Final		$2,520	

4	Urban Forest Master (Management) Plan (UFMP)	536		$52,570
	Kick Off Meeting (virtual)		$1,640	
	Background/Doc Review (policies, regulations, plans)		$7,600	
	Internal/Managing Stakeholder Interviews (virtual) (up to 10)		$4,660	
	Project meetings (monthly) (up to 18)		$7,380	
	Tree Species List (comprehensive)		$3,800	
	UFMP - Draft 1 (95%, unformatted)		$12,500	
	UFMP - Draft 2 (99%, formatted)		$5,800	
	UFMP - Final		$3,280	
	Design and Layout		$3,150	
	Project management/admin		$1,000	
	Council Presentation (virtual) (1)		$1,760	
	Optional			$293
	Optional - onsite Council Presentation		$293	
5	Community Outreach and Engagement	208		$25,740
	Project Landing Page (webpage) - 18 months		$3,800	
	Publicinput.com - 18 months		$5,020	
	Online Survey (2) (English/Spanish)		$3,800	
	Community Meetings - virtual/interactive and recorded for webpage		-	
	1 - Tree Protection Ordinance (2 staff)		$2,520	
	1 - 50 year UFMP (2 staff)		$2,520	
	External Stakeholder Interviews (virtual) (up to 5)		$2,900	
	Pop Ups - 2 Days		$3,180	
	Project management/admin		$2,000	
	Optional			$1,344
	Optional - Community Meeting onsite - Ordinance		$672	
	Optional - Community Meeting onsite- UFMP		$672	
Total (without options)				**$165,534**
6	New and modified scope	991		$92,500
	i-Tree Eco Sample Plot Collection	852	$77,490	
	Mailings/Notifications	52	$5,555	
	i-Tree Eco Resource Analysis/Report - wetlands and private parcels (2 distinctions)	79	$7,975	
	Tree planting pop ups (2) (consecutive to Farmers Market, Fri/Sat)	8	$1,480	
Total (including all options)				**$268,664**

Personnel Billing Rates/Hours

Name	Team Position	Billing Rate ($/hr)	Expected Hours
Emily Spillett	NorCal Area Manager	$135.00	16
Tina McKeand	Sr. Project Manager	$125.00	166
Elizabeth Lanham	Project Manager	$95.00	40
Will Ayersman	GIS Project Manager	$125.00	12
Allison Serafin Steere	Sr. Associate Consultant	$95.00	300
Holly Knox	Inventory Field Software Support Coordinator	$95.00	23
Rachel Sitz	Associate Consultant, Entomology/ Plant Pathology	$95.00	270
Dan Jackman	Inventory Arborist	$85.00	174
Brenda Wong	Inventory Arborist	$85.00	142
GIS Analysts	GIS Technician and Senior Geospatial Analyst	$45.00	430

c. Payment Request. Consultant shall submit a request for payment for services on a monthly basis by letter to Director, or said Director's designated representative. Such request for payment shall cover the preceding monthly period during the term hereof, shall note the City's purchase order number for this Contract, shall contain a detailed listing of the total number of items or tasks or hours for which payment is requested, the individual dates on which such services were rendered, and invoices for reimbursable expenses, if any. Upon receipt in the Office of Director of said payment request, Director shall cause payment to be initiated to Consultant for appropriate compensation.