



PRESENTATION TO VIENNA TOWN COUNCIL

Trees In Vienna: A Review Of Programs To Help Vienna Preserve And Manage Its Tree Canopy

March 6, 2023 | Brian Land, Kirkland & Ellis

| Christina Caplan, Vienna Conservation and Sustainability Commission

How Did This Project Start?



2019: Met with Mayor DiRocco and CSC

Noticeable Loss of Trees, Particularly with Increase in New Construction

What Can We do to Better Preserve and Manage our Tree Canopy?

Idea: Interview Experts, Stakeholders, Other Communities

2020: Met with Mayor Colbert

Sept 2020: Project was approved by Town Council


Feb 2021: Project Began



Project Team

- Kirkland & Ellis LLP (law firm)
- Vienna Conservation and Sustainability Commission
- Ramboll (environmental consultancy)

Project Was Conducted Free of Charge to the Town



How Did We Conduct the Project?

1. Interviewed More Than 50 Individuals
2. Reviewed Virginia's Tree Laws and Tree Ordinances in Vienna and Other Northern Virginia Communities
3. Reviewed Tree Reports Prepared for Other Communities

50 Interviews



Table 1.1: Individuals Interviewed	
Name	
1. Eric Wiseman, Assoc. Prof. of Urban Forestry, Virginia Tech	
2. Jarlath O'Neill-Dunne, Univ. of Vermont Spatial Analysis Lab	
3. Karen Firehock, Director, Green Infrastructure Center	
4. Ed Milhous, President, TreesPlease	
5. Mike Galvin, Director of Consulting, SavaTree Consulting Group	
6. Shirley Vaughn and William Ayersman, Davey Trees	
7. Ian Hanou and Chris Peiffer, PlanIT-Geo	
8. James McGlone, Urban Forest Conservationist, Virginia Dept. of Forestry	
9. John Dudzinsky, Urban Forester, Town of Herndon	
10. Vincent Verweij, Urban Forester, Arlington County	
11. Brian Keightley, Fairfax County	
12. Chap Petersen, Virginia State Senator	
13. Lara Johnson, Virginia Dept. of Forestry	
14. Julia Flanagan, Prince William County	
15. Kyle Dingus, Loudoun County Urban Forester	
16. John Marlin, City of Alexandria	
17. Julie Mawhorter, US Forest Service	
18. Charles Prince, Acting Arborist, City of Falls Church	
19. Kate Reich, Former Arborist, City of Falls Church	
20. Earl Eutsler, DC Dept. of Transportation	
21. Rob Fisher, Fisher Custom Homes	
22. Mark Stahl, Stahl Homes	
23. Patrick Ohlhorst, Cloud IX Homes	
24. Patrick Stack, Jefferson Homes	
25. Steve Jriege, Vienna Development Alliance	
26. Steve Bukont, Bukont Homes	
27. John Sekas, Sekas Homes	
28. Mark Buscalino, Executive Director, Casey Trees	

Table 1.1: Individuals Interviewed	
Name	
29. Cindy Speas, Faith Alliance for Climate Solutions	
30. Anne Little, Tree Fredericksburg	
31. Jenny McGarvey, Alliance for the Chesapeake Bay	
32. Cathy Vick, Manager, Electric Distribution Forestry, Dominion Energy	
33. Maureen Alonso, Joanne Burke, and Susan Stillman, Past Members of the Vienna Conservation and Sustainability Commission	
34. John Jay Sergeant, Public Works Engineer, Town of Vienna	
35. Cindy Petkac, Director of Planning & Zoning, Town of Vienna	
36. Leslie Herman, Director of Parks & Recreation, Town of Vienna	
37. Jeremy Edwards, Green Space Manager, City of Falls Church (now Park Maintenance Superintendent, Town of Vienna)	
38. Gary Lawrence, Former Arborist, Town of Vienna	
39. Scott Diffenderfer, Arborist, Town of Vienna	
40. Laurie DiRocco, Former Mayor, Town of Vienna	
41. Chuck Anderson, Vienna Town Council	
42. Steve Potter, Vienna Town Council	
43. Howard Springsteen, Vienna Town Council	
44. Linda Colbert, Vienna Mayor	
45. Nisha Patel, Vienna Town Council	
46. Steve Briglia, Vienna Town Attorney	
47. Judy Fraser, City of Fairfax Environmental Sustainability Committee	
48. Nora Palmatier, Tree Stewards of Arlington & Alexandria	
49. Kathy Costa, Chair, Falls Church Urban Forestry Commission	
50. Amy Crumpton, Falls Church Urban Forestry (formerly Tree) Commission	

Table 1.docx



What Did We Learn?

Trees are Critical Community Infrastructure

Environmental Benefits

Produce Oxygen and Remove Air Pollutants

Store Carbon and Help Mitigate Climate Change

Provide Shade, Lower Air Temperatures, and Reduce Cooling Costs

Reduce and Filter Stormwater Runoff and Reduce Flooding and Erosion

Provide habitat for wildlife

Health and Safety Benefits

Remove Pollutants from the Air We Breathe

Provide Relief and Reduce Stress From High Heat Days

Improve Mental Health and Encourage Exercise

Slow Traffic Speeds

Absorb and reduce traffic noise

Economic Benefits

Increase Home and Property Values

Attract More Consumers to Business Districts

Improve Social Connections

Build A Stronger Sense of Community



What Did We Learn?

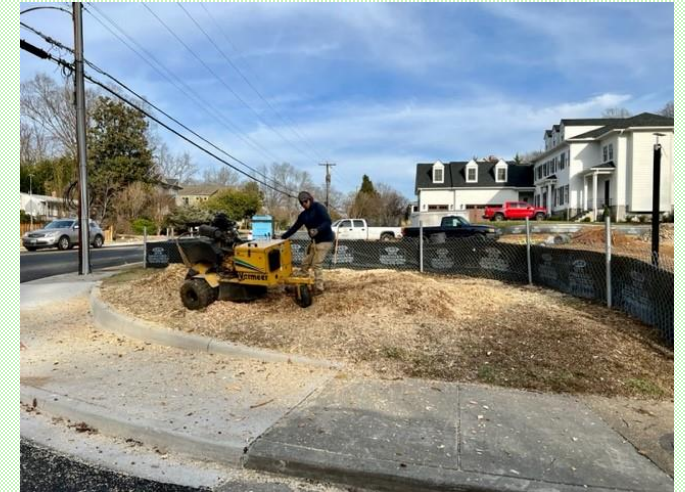
Suburban Environments Present Challenges for Trees

- Compacted soils
- Concrete and impermeable surfaces
- Physical damage to limbs and roots
- Invasive vines
- Summer heat
- Drought
- Insect damage
- Disease

What Did We Learn?

Vienna's Challenges to Preserving Trees

100 Home Teardowns/Rebuilds Per Year





What Did We Learn?

Vienna's Challenges to Preserving Trees

100 Teardown/Rebuilds
Each Year

Homes Designed to
Maximum Footprint

Deeper Excavations with
Onsite Staging of Excavated
Soil

Pumped Concrete
Foundations and Access for
Pumping Trucks

New Water and Sewer Lines

New Gas Line

New Underground Electrical
Line

New Underground Phone/Cable
TV/Internet Line

Dumpster, Potty, and all
Construction Materials Onsite

Onsite Stormwater
Management Systems

Post-Construction Grading
Requirements

Sidewalk Reconstruction or
Installation

What Did We Learn? Vienna's Tree Canopy is Declining

~100 Teardowns a Year in Vienna. How Many Trees Have Been Lost?

Falls Church estimates 5 mature trees lost per teardown.

Davey Resource Group Conducted Urban Tree Canopy (UTC)
Assessment of Vienna in 2022

Vienna's Tree Canopy Decreased in 10 Years from 2011 to 2021

- **13% Decrease in Canopy** = Decrease from 44.5 % to 38.7%
- **Loss of About 163 Acres of Canopy** = Decrease from 1253 to 1090 Acres
- **Some Areas of Town Had a Decrease Greater Than 30%**

What Did We Learn?

Trees Provide Substantial Annual Benefits to Vienna



Vienna receives over **\$4.3 million** in total annual benefits from its tree cover

- Carbon storage: Annual value \$245,235 / Stored carbon value of \$6.4 million
- Stormwater absorption and reduction in runoff
 - **Removes 23.6 million gallons of stormwater each year**
 - **Annual value of over \$4 million**
 - **Each tree takes up 420 gallons of stormwater annually**
- Removal of air pollutants (CO, NO₂, SO₂, ozone): Annual value of \$27,193
- Improved air quality (PM removal): Annual value of \$26,294

What Do We Recommend Vienna Do?

1. Establish a Tree Commission



Vienna maintains a Conservation and Sustainability Commission (CSC).

- Broad environmental mission: energy conservation, natural resource protection, trash, recycling, composting, sustainable development, tree protection and replacement.
- Constitutes Town's tree board: advocate for planting budget, Arbor Day celebration, impetus for 2014 minimum canopy requirements, helped update 2017 Tree Preservation & Planting Guide, biannual native plant sales, seedling giveaways, education and outreach about tree benefits.
- CSC's mission is *not solely dedicated to trees*.

Nearby communities such as Fairfax County, Falls Church, and Leesburg have a dedicated tree board or commission that is *focused solely on trees*. A Vienna Tree Commission could:

- Continue and expand on CSC initiatives.
- Identify and use funding opportunities and grants for tree planting on public and private property.
- Help the Town implement the 100+ recommended actions we compiled to increase tree canopy and enhance tree management.

Recommendation: Establish a Tree Commission that is focused solely on trees (policy, management plan, data, public outreach, planting events).

What Do We Recommend Vienna Do?

2. Establish a Tree Planting Budget and Track Number of Trees Planted



- ▶ Vienna's Department of Parks and Recreation has an annual \$15,000 horticulture budget and two full-time staff for flower planting, equipment, and maintenance.
- ▶ Vienna's annual budget for tree removal has ranged from \$30,000 to \$50,000 over the past few years — with little or no budget money specifically allocated to tree planting.
- ▶ Interviewees stressed need to add staff and allocate funds solely for purchasing, planting, watering, and maintaining trees—or for contracting out for these services.
- ▶ Other northern Virginia governments we interviewed maintain and track their tree planting budgets and number of trees planted as part of their urban forest plan.

Recommendation:

Develop a multi-year planting plan (use UTC assessment data, Parks and Recreation and Town arborists, Tree Commission).

Establish an annual budget line item for tree purchases, planting and maintenance.

Track and publish the number of trees Vienna plants each year.

What Do We Recommend Vienna Do?

3. Adopt the Tree *Conservation* Ordinance

- Virginia is a “Dillon Rule” state: Local governments such as Vienna may only adopt ordinances where the General Assembly has expressly or implicitly granted them authority to do so.
- Virginia State Code authorizes adoption of local tree ordinances under two sections. In 1990, the Virginia General Assembly granted localities in the Chesapeake Bay watershed the authority to adopt a tree **replacement** ordinance. (Section 15.2-961) The General Assembly also granted certain localities in Planning District 8 (which includes Vienna) the authority to a tree **conservation** ordinance. (Section 15.2-961.1)

Vienna -- Tree *Replacement* Ordinance

- In 1991, Vienna adopted the **tree replacement ordinance** applicable only to new subdivisions.
- In 2014, Vienna extended the tree replacement ordinance to apply to single lot development/redevelopments.
- **20% Tree Canopy in 20 Years:** Under Vienna’s tree replacement ordinance, builders must submit a plan for planting and replacement of trees on site during development so that, at 20 years in the future, the lot will be covered by a minimum of 20% tree canopy in RS-16, RS-12.5, and RS-10 zones.
- Existing trees may be preserved to meet all or part of the tree canopy requirement if such trees are identified on the site plan and they meet the Town’s standards. **There is no requirement to preserve or make an effort to preserve existing trees.**

3. Recommend Vienna Adopt the Tree *Conservation* Ordinance

(Adopted by Fairfax County in 1990)

- In 1990, Fairfax County adopted the tree **conservation** ordinance under authority of 15.2-961.1
- The ordinance allows minimum tree canopy requirements to be met through the preservation or replacement of trees. However, when existing trees meet standards of health, condition, and suitability, and when it is feasible to preserve those trees, all efforts shall first be made to meet the tree canopy requirement through the ***preservation of trees before tree planting***.
- Tree preservation targets are set at the percentage of the site covered by tree canopy at the time of plan submission and equal the minimum portion of the applicable canopy requirement that must be met through tree preservation.
- The ordinance sets **higher tree canopy requirements**. Some residential lots in Vienna (RS-16, RS-12.5) would have a **25% tree canopy in 20 years** requirement, rather than the current 20% in 20 years.
- The ordinance **allows for deviations and waivers**. Builders who demonstrate that minimum canopy requirements cannot be met through preservation or onsite planting may seek a waiver and contribute to the Tree Preservation and Planting Fund. Fairfax County reports that waivers are rare (only 41 in 10 years). The fund is used to support public and other planting by government agencies and 501(c)(3) organizations.
- ***Recommendation: Adopt the tree conservation ordinance to help preserve existing trees and create additional tree planting.***

Additional Recommendations

Conduct a Street Tree Inventory and Identify Priority Planting Locations on Town Property	Establish a Nonprofit “Vienna Tree Foundation” That Can Receive Grants and Donations and Can Plant Trees on Private Property	Update Vienna’s tree credit system
Conduct early arborist review of site plans new construction projects	Make use of resident volunteers to nurture newly-planted town trees	Adopt a Heritage Tree ordinance
Consider incentives that could be offered to builders for tree preservation	Expand Arbor Day into a group tree planting day throughout the town	Prioritize enforcement of tree laws in the town. Enact a civil penalty ordinance of violation of Town tree requirements
Limit paving of front yards to allow space for trees (this is in place in Fairfax county)	Update tree preservation and planting guide and replacement tree list	Give credit for the stormwater benefit of preserving trees, especially large mature trees
Plant trees in tree lawns soon after sidewalks are installed	Consider a dedicated utility fee to be used for tree planting	Initiate a tree planting campaign to encourage voluntary tree planting
Make use of existing tree planting contracts with neighboring jurisdictions to lower tree purchase costs	Conduct regular tree/seedling giveaways	Organize big planting events
Increase publicity for Vienna’s existing tree donation program	Require bonds to help tree survival	Education and outreach so stakeholders appreciate the value of Vienna’s trees and what is necessary for their stewardship

Our Three Principal Recommendations for Town Council



1. Establish a Vienna Tree Commission
2. Develop a public tree planting plan, establish an annual tree budget, and publish and update annually information and statistics regarding the Town's efforts with regard to trees -- including amounts spent for tree planting and number of trees planted.
3. Adopt a Tree Conservation Ordinance as authorized under Virginia Code Section 15.2-961.1.

A Tree Conservation Ordinance for Vienna

DRAFT: 3/4/2023

CHAPTER 29 - TREE CONSERVATION

ARTICLE 1. GENERAL PROVISIONS

Sec. 29-1-1. Title.

This chapter shall be known as the "Vienna Tree Conservation Ordinance."

Sec. 29-1-2. Authority.

This chapter is enacted pursuant to the authority of Va. Code Ann. §§ 15.2-961, and 15.2-961.1.

Sec. 29-1-3. Purpose and intent.

The purpose and intent of this chapter is to provide for the conservation and management of Town trees, and to provide for the conservation of trees during land development. The conservation (i.e., preservation and planting) of trees will protect, sustain, and enhance the Town's urban forest resources. These forest resources provide important aesthetic, social, and economic benefits and are indispensable to the conservation and management of vital atmospheric, water, soil, and ecological resources.

Sec. 29-1-4. Administration.

The Director of Parks and Recreation shall be responsible for the administration and enforcement of this chapter.

Sec. 29-1-5. Severability.

If any of the articles, sections, paragraphs, sentences, clauses, or phrases of this chapter shall be declared unconstitutional or invalid by a valid judgment or decree of a court of competent jurisdiction, such unconstitutionality or invalidity shall not affect the validity of this chapter in its entirety or any of the remaining articles, sections, paragraphs, sentences, clauses, and phrases herein.

ARTICLE 2. VIENNA TREE COMMISSION.

Sec. 29-2-1. Tree Commission Purpose.

There is hereby created and established a commission to be known as the Vienna Tree Commission, which shall advise and assist Town Council and Town Staff on matters relating to the conservation and management of the Town's Trees and Tree canopy and assist the Town in the development and maintenance of specifications and guidelines related to the same.

Sec. 29-2-2. Tree Commission Membership.

The commission shall consist of seven members, all of whom shall be appointed by Town Council. At least one member shall be selected from the Conservation and Sustainability Commission. In addition, a Town representative(s) from the Departments of Parks and Recreation and/or Planning and Zoning shall serve as an ex-officio member(s) of the commission. Except for the Town representative(s), all appointees shall be either residents of the Town or representatives of businesses or professions located in and licensed by the Town. In making all appointments to the commission, Town Council shall give consideration to persons who have evidenced an interest or expertise in Tree conservation and tree policy.

Sec. 29-2-3. Tree Commission Term of Members.

The term of all members shall be for two years. Initially, four members of the board shall be appointed for a term of one year and three members shall be appointed for a term of two years. Thereafter, all appointments to the commission, except for those to fill an unexpired term, shall be for a period of two years. All members shall serve without compensation. Vacancies occurring on the commission for reasons other than

DRAFT: 3/4/2023

the expiration of terms shall be filled by Town Council for the remainder of the unexpired term. Members shall be eligible for reappointment. Members may be removed from the commission by a majority vote of Town Council.

Sec. 29-2-4. Tree Commission Powers and Duties.

(a) The tree commission shall have the following powers and duties:

1. To recommend rules, regulations, policies and programs to the mayor, Town Council, and Town staff relating to tree conservation and management, the care and improvement of the Town's urban forest, and protecting and enhancing the Town's tree canopy.
2. To advise and assist the mayor, Town Council, and Town staff regarding the planting, protection, maintenance, preservation, and removal of trees, shrubs, and other plants located on public property within the Town.
3. To ensure that the planting, maintenance, pruning, and removal of trees and shrubs on public property within the Town are done in accordance with current accepted standards as established and set forth by the National Arborist Association and by the American Association of Nurserymen's Council American Standard for Nursery Stock.
4. To develop, maintain, and administer a written plan for the care, preservation, pruning, planting, replanting, removal, or disposition of trees and shrubs in parks, along streets, and in other public areas. Such plan will be reviewed annually, updated as necessary, and presented to Town Council; upon acceptance and approval by Town Council, such plan shall constitute the official public tree management plan for the Town.
5. To assist the Town with compiling and analyzing data to measure the Town's progress in restoring the Town's tree canopy.
6. To serve as the Town's representative at, and to attend and bring back knowledge and information from, area regional and interagency meetings, seminars, summits, and conferences concerning urban forestry programs and policies.
7. To undertake an ongoing program of public outreach and education in order to promote public understanding and support of the Town's public tree management plan and to increase public awareness of the value and benefits of a diversified, sustainable community forest.
8. To recommend to Town Council and to the appropriate department directors the adoption of such rules, regulations, and policies as may be necessary to implement and enforce the public tree management plan and related ordinances.
9. To work with Town staff to compile, publish, and update annually information and statistics regarding the Town's efforts with regard to trees, including a) the amount spent each year by the Town for the purchase and planting of trees, b) the number of trees planted on Town property each year, c) the number of trees on Town property cut down or removed, d) any available data regarding the extent of or changes to the Town's tree canopy, and e) any available data regarding an inventory of the Town's street trees, such as the percentage of street tree planting sites that are filled, and priority street tree planting sites that are unfilled. The commission shall present a report to Town Council each year that includes a description of the commission's activities, key data and statistics, and ongoing and anticipated future activities.

(b) Town Council shall have the right to review the conduct, acts, and decisions of the tree commission. When requested by Town Council, the tree commissions shall consider, investigate, make findings, report on, and recommend any special matter or question coming within its powers and duties.



A Recommendation for Code Create To Allow for Trees in Front Yards

Incorporate the 30 Percent Limitation on Front Yard Surfacing That is in Place in Fairfax County

Front Yard Surfacing

In the RS-16, RS-12.5, and RS-10 Districts, **no more than 30 percent of any front yard may be surfaced area for a driveway or vehicle or trailer parking area.** On a pipestem lot, the surfaced area within the pipestem driveway is not included in this limitation. In addition, these limitations may be exceeded for a surfaced area that is:

- (a) Limited to two side-by-side parking spaces if the surfaced area is not more than 25 feet long and 18 feet wide;
- (b) On a lot that has its primary access from a major thoroughfare and consists of two side-by-side parking spaces and a vehicular turn-around area as long as the surfaced area is not more than 25 feet long and 18 feet wide and the turn-around area does not exceed 150 square feet; or
- (c) Provided as an accessibility improvement as approved by the Zoning Administrator.

