

# Bristol Urban Forest

— Preliminary Management Plan —



Bristol Park c. 1900



Bristol Park October 2015

Bristol Urban Forest Preliminary Management Plan

Bristol, Vermont

Town Administrator: Therese Kirby

Town Highway Department  
Foreman: Pete Bouvier

Compiled by:

Bristol Conservation Commission  
Randy Durand

Addison County Regional Planning Commission  
Claire Tebbs

Vermont Urban Community Forestry Program  
Elise Schadler



Maple Street, Bristol, Vt.

c. 1920

Looking up Maple Street

# Table of Contents

<b>I</b>	<b>Introduction</b>	<b>4</b>
	Background	4
	Why Is This Important?	4
	Purpose	5
	History of Urban Forestry in Bristol	5
<b>II</b>	<b>What Do We Know?</b>	
	1. Funding	8
	2. Partners and Potential Partners	8
	3. Community Benefits	9
	4. Inventory Results	9
	5. Inventory Recommendations	11
	Conclusion	12
<b>III</b>	<b>What Do We Want?</b>	<b>12</b>
	Short-term Goals	12
	Mid-range Goals	12
	Long-term Goals	12
<b>IV</b>	<b>How Do We Get There?</b>	<b>13</b>
	1. Funding	13
	2. Equipment	13
	3. Current Practice	13
	4. Recommended Practice	13
	5. Recommended Next Steps	14
<b>V</b>	<b>Literature Cited</b>	<b>15</b>

# I. INTRODUCTION

## BACKGROUND

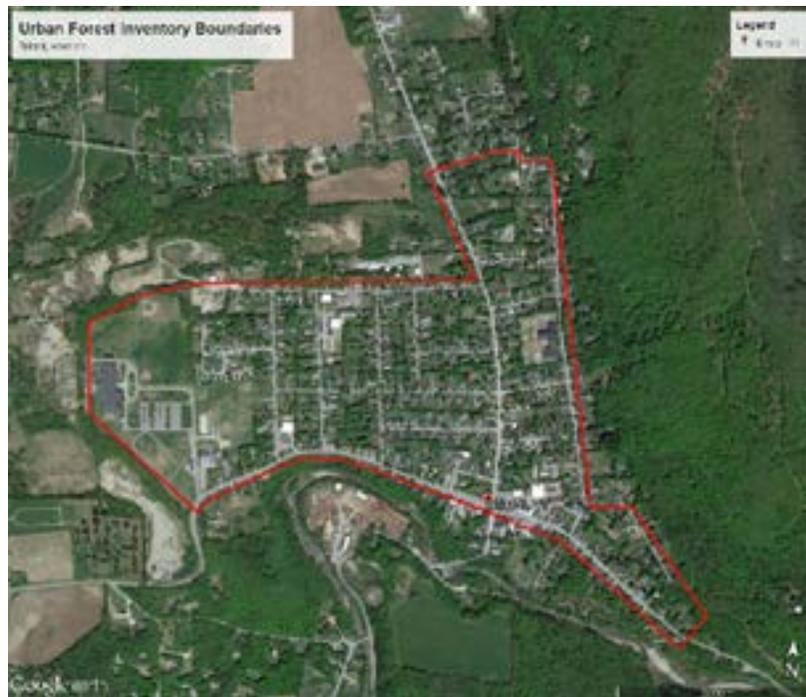
During the Fall of 2014, four students from the Land Stewardship (LANDS) Field Semester program, with direction from the Vermont Urban and Community Forestry Program (VT UCF), inventoried public<sup>1</sup> trees in the vicinity of Bristol's Downtown area. Four interns photographed, recorded locations, species, size and condition of 562 public trees on twenty-seven streets.

This preliminary urban forestry management plan is the follow-up document to this inventory and lays the ground work for the Town of Bristol to strategically care for and improve its network of urban street and park trees. The Plan is guided by the information and recommended actions provided in the inventory as well as the history of knowledge held by the Town of Bristol staff and residents.

This preliminary plan outlines the benefits and current condition and management of our urban forest in order to identify goals, strategies and evaluation techniques for evolving and managing a healthy urban forest into the future.

## WHY IS THIS IMPORTANT?

Walk down any tree-lined street on a hot day and it is easy to understand one advantage of having healthy street trees. The benefits of trees in a built environment do not end with cooling and shading. A healthy urban forest extends the ecological services found in adjacent natural areas. They provide important wildlife refuge (birds and



---

<sup>1</sup> A public tree is 25 feet from the center line of the road or is on town owned land.

pollinators), increase air quality and curb stormwater runoff. Trees create beautiful places, raise property values, sequester carbon, and reduce energy costs. Bristol would not be the place we love without its trees.

More information on the quantified benefits of Bristol's urban forest can be found in the inventory document in the appendix of this management plan. For extensive information on the benefits of trees in the urban landscape, please visit the Vermont Urban and Community Forest (VUCF ) website. <http://www.vtcommunityforestry.org/resources/benefits-trees/tools-assessing-tree-benefits>

## PURPOSE

Having a management plan for our public trees provides a roadmap for where and when to plant new trees, removing and replacing trees, maintenance and funding strategies to cost effectively improve the public green spaces in our downtown and downtown residential district.

## HISTORY OF URBAN FORESTRY IN BRISTOL

Efforts have been underway for over 100 years if not more, for Bristol to have tree-lined streets. In 2014, Bristol resident, Reg Dearborn prepared a historical report on tree planting efforts in the late 1800's. Historical pictures of this time can be seen on the following pages.

Today tree planting and maintenance efforts are the responsibility of the Town and Highway Department, but there are other groups, including residents that hold an interest in having a healthy urban forest. This list is seen in the partners/potential partners listed in Chapter II.



*Bristol Village c. 1905  
(Masonic Hall is visible which was built in 1900)*

### **Trees on west end planted by H. Munsill**



Early plantings on Pleasant St.



Trees on East Street



West Street



Harvey C. Munsill, was born in Bristol on June 22, 1824. He took over his father's real estate and at one time owned all the land west of Maple Street. He assisted in planting many of the maple trees on the streets of the town including all of them on Maple Street.



*Four elm tree plantings on Elm Street, 20+ years ago.*

## II. WHAT DO WE KNOW?

### 1. FUNDING

The development and writing of this preliminary management plan was funded in part by the Vermont Department of Forest, Parks and Recreation and in partnership with the UVM Extension Program and Addison County Regional Planning (ACRPC).

Funding for public trees in Bristol in the past has been accomplished by grant funds and by an annually allocated tree budget.

### 2. PARTNERS AND POTENTIAL PARTNERS

Technical support for this plan was provided by ACRPC and the Vermont Department of Forest, Parks and Recreation in partnership with the Bristol Conservation Committee.

The Bristol Conservation Committee and/or the Bristol Planning Commission are the best contacts for questions associated with this management plan. Contacts for both the conservation commission and the planning commission can be found by calling the Bristol Town Office: (802)453-2410 Vermont Department of Forests, Parks and Recreation.

**Partners**

Addison County Regional Planning Commission  
UVM Forestry Extension  
Vermont Department of Forestry, Park and Recreation  
Vermont Urban and Community Forests  
Town of Bristol  
Bristol Planning Commission  
Bristol Conservation Commission  
Bristol Highway Department  
Bristol CORE – Downtown Committee  
Bristol Historic Society

**3. COMMUNITY BENEFITS**

Trees are an integral part of the green infrastructure of a community. Trees contribute to keeping our families healthier and everyday lives more fulfilling.

**How communities benefit from urban trees**

1. aesthetic values
2. provide shade in the summertime
3. blocking wind to reduce winter heating costs
4. positively affect property values
5. boosts foot traffic in commercial areas
6. parks and tree-lined sidewalks provide shaded, comfortable outdoor spaces
7. provides food and shelter for urban wildlife
8. air quality improvement and temperature regulation
9. mitigates noise pollution
10. cleans and conserves water by controlling storm run-off

**4. INVENTORY RESULTS**

The goal of the public tree inventory was to document the location, size, species composition, and condition of trees planted within the public right-of-way (ROW) and on town-owned land within the downtown and most populated neighborhoods of the Town of Bristol. This information provides residents and decisions-makers with a better understanding of the composition, health, and benefits of Bristol’s urban forest and will allow the Bristol Conservation Commission (BCC) to plan for future tree planting and maintenance using a map-based tree inventory system. The map below shows the boundaries used for the inventory. The inventory report can be found in the appendix of this management plan.

The tree inventory found that the majority of urban trees in Bristol (88%) were considered in good condition. However, the study also showed that there is ample room for an increase in tree canopy (by 63%).

Street/site name	ROW Extent (feet)	Number of Trees	Number of Vacant Spots or Strips
Airport Drive	50	8	4
Basin Street	50	5	1
Church Street	50	12	1
Crescent Street	50	5	14
Devino Lane	50	13	5
East Street	50	12	1
Elm Street	50	3	0
Fitch Avenue	50	2	0
Garfield Street	50	18	2
Bristol High School	n/a	44	7
Lawrence Lane	50	4	0
Liberty Street	50	18	0
Lower Meadow Lane	50	23	0
Maple Street	50	45	2
Meadow Lane	50	19	6
Mountain Street	50	40	15
Mountain Terrace	50	23	0
Munsill Avenue	50	20	5
North Street	50	43	12
Park Place	50	0	2
Pine Street	50	30	0
Plank Road	50	0	1
Pleasant Street	50	37	8
School Street	50	6	1
Spring Street	50	18	7
Taylor Avenue	50	33	7
Town Green	n/a	40	3
Town Offices (inc. Historic Society property)	n/a	24	2
West Street	50	17	0
<b>TOTAL</b>		<b>562</b>	<b>106</b>

## **5. INVENTORY RECOMMENDATIONS**

The recommendations provided in the inventory were organized by four categories, as follows:

### **Urban Forest Diversity and Structure**

Develop species, structural, and age diversity by planting new species and increasing the number of lesser represented species using best management practices in order to promote long-term health and resilience of individual trees and Bristol's urban forest.

### **Maintenance**

Establish a routine maintenance cycle, implemented by trained professionals and overseen by the Bristol Conservation Commission for all public trees to promote tree health and reduce any threat to public safety.

### **Urban Forest Health**

Continue to monitor trees in "Good" and "Fair" condition, plan to lose trees in "Poor" condition, remove "Dead" trees to increase overall urban forest health, and involve the community, especially youth, in tree plantings, stewardship, and maintenance.

### **Assessment Tools**

Use the information generated through the i-Tree Streets and i-Tree Canopy programs to promote local stewardship and investment in urban forest management. Explore the other free assessment tools in the i-Tree tools suite ([www.itreetools.org](http://www.itreetools.org)).

## CONCLUSION

We know that in general, Bristol's public trees are in good health but there is ample opportunity for more trees to be incorporated with more diversity of species. At this time, Bristol residents have not been surveyed specifically about how/if they value public trees. However, the Town and other groups have stated interest in maintaining public trees.

## III. WHAT DO WE WANT?

### Short-Term Goals

A primary purpose of this preliminary management plan is to engage private landowners, Bristol CORE, and all other future stakeholders by increasing awareness of all benefits — environmental, economic, and social wellbeing — of tree planting.

Before a management plan can be developed, Bristol needs to review and revise the responsibilities of a Tree Warden (TW), appointed by the Selectboard. A Tree Advisory Board (TAB) should be appointed to assist the Tree Warden in making decisions about town tree priorities.

A Tree Advisory Board should develop a survey to help identify the goals and objectives of the stakeholders. Since Bristol tax increases (due to the present and future bond issues) would make it difficult to seek an appropriation for urban tree management. A TAB should investigate tree funding/grant opportunities.

### Mid-Range Goals

Once a TW, TAB, and funding is in place a final management plan will make site specific, prioritized, inventory-based recommendations for managing Bristol's public tree resources for a five year time period.

### Long-Term Goals

Complete a full inventory of all urban public trees in Bristol. Bristol should see an increase in canopy cover from the current 25% to a more desirable 35-40%. A minimal goal of many national cities. Vacant right-of-way tree sites should be replanted with a diverse range of trees suited for urban sites and the potential arrival of forest pests. Scheduled tree maintenance will support the health of current urban trees.\* Consider contracting a certified arborist to assist the TAB and TW in their deliberations.

\*If funding is available.

## IV. HOW DO WE GET THERE?

This section outlines strategies to meet the short and long term goals of this plan.

### 1. FUNDING

Bristol currently budgets \$5,000/year for tree maintenance, removal, and plantings. Tree removal can cost between \$1,000 – \$1,500 per tree (plus a smaller fee for grinding the stump). If money is left at the end of the year, it is used for plantings. Normally there is little, if any, money left for new trees. The last plantings occurred two years ago. If a tree advisory board gets appointed, an important task would be to explore tree funding through donations and grants.

#### POTENTIAL FUNDING SOURCES

##### Town of Bristol

The recent twenty year bond for the construction of the new fire station, the South Street Bridge, and the probability of another bond for improvements to the local middle/high school makes an appropriation for funding a tree management plan problematic.

##### Vermont Urban and Community Forestry

UVM-UCF can provide support for acquiring grant funding.

### 2. EQUIPMENT

#### A. Equipment available

The Highway Department has seven chainsaws, hardhats, and chaps for tree management projects.

#### B. Equipment needed

Stump grinder, chipper, and bucket truck.

### 3. CURRENT PRACTICE

Trees are targeted for potential maintenance/removal by casual inspection of town roads by the Highway Department. Landowner complaints are effective in prioritizing tree care. Trees for replanting have been recommended by a Selectboard member and the Highway Department foreman. The location and height of transmission wires can determine the species of tree to be planted. Local sourcing of new trees have provided many of the plantings. Trees outside of the inventoried area that are in need of care are noted by Highway Department personnel.

### 4. RECOMMENDED PRACTICE

To sustain and improve Bristol's Urban Forest, planning the implementation of a shade tree preservation plan should be initiated. The plan should be administered and updated for the care, preservation, pruning, planting, removal or disposition of trees

and shrubs in parks, along streets, and in other public areas. Community members, including private landowners, business owners and all other future stakeholders, should be made aware of environmental economic and social well-being of tree planting. Grant funding options should be investigated to support the recommendations of an urban forest plan. An urban tree policy/ ordinance can help protect a town from litigation involving urban tree damage.

#### **5. RECOMMENDED NEXT STEPS**

- Appoint a Tree Warden to coordinate the development of a Bristol Urban Forest Management Plan.
- Appoint a Tree Advisory Board to survey the urban forest interests of the town, administer and update the management plan, investigate grant funding opportunities for the plan, create a Tree Policy or Urban Forest Ordinance, organize an annual Arbor Day ceremony.

## Literature Cited

Bristol Historical Society Archives, Reg Dearborn

Dwyer, J.F., H.W. Schroeder, and P.H. Gobster. 1991.

The Significance of Urban Trees and Forests: toward a deeper understanding of values.

Journal of Arboriculture 17:276-284

Morales, D., B.N. Boyce, et al (1976).

The contribution of trees to residential property value. *ASA Valuation* (23:36-43)

VT Urban and Community Forest (VTUCF) Program

– Management Plan Development

VT Urban and Community Forest (VTUCF) Program

– Bristol Public Tree Inventory Report

Village of Essex Junction Urban Forest Management Plan