

# 1963 Master Plan of The Arboretum at Springside Park, Pittsfield, Massachusetts

Prepared by Richard C. Page October 1963

The original manuscript of this plan was handed to Hebert Arboretum by Vinny Hebert with the statement, "This is the Master Plan for the Arboretum at Springside Park that I commissioned Richard Page to create".

## Development Of The Springside Park As An Arboretum

**Purpose: To provide a wide variety of trees for the enjoyment and education of the public.**

### DEVELOPMENT OF THE SPRINGSIDE PARK AS AN ARBORETUM

**Purpose:** To provide a wide variety of trees for the enjoyment and education of the public.

As each section or facility of the park is developed, the designer or landscape architect responsible for the planning of this area should refer to the arboretum plan and use primarily those plants belonging to the plant family indicated for that particular section of the park. The area of the park assigned to a particular plant family should contain one or preferably more representatives of each species or variety of that plant family recommended in the accompanying plant list.

As each section or facility of the park is developed, the designer or landscape architect responsible for the planning of this area should refer to the arboretum plan and use primarily those plants belonging to the plant family indicated for that particular section of the park. The area of the park assigned to a particular plant family should contain one or preferably more representatives of each species or variety of that plant family recommended in the accompanying plant list.

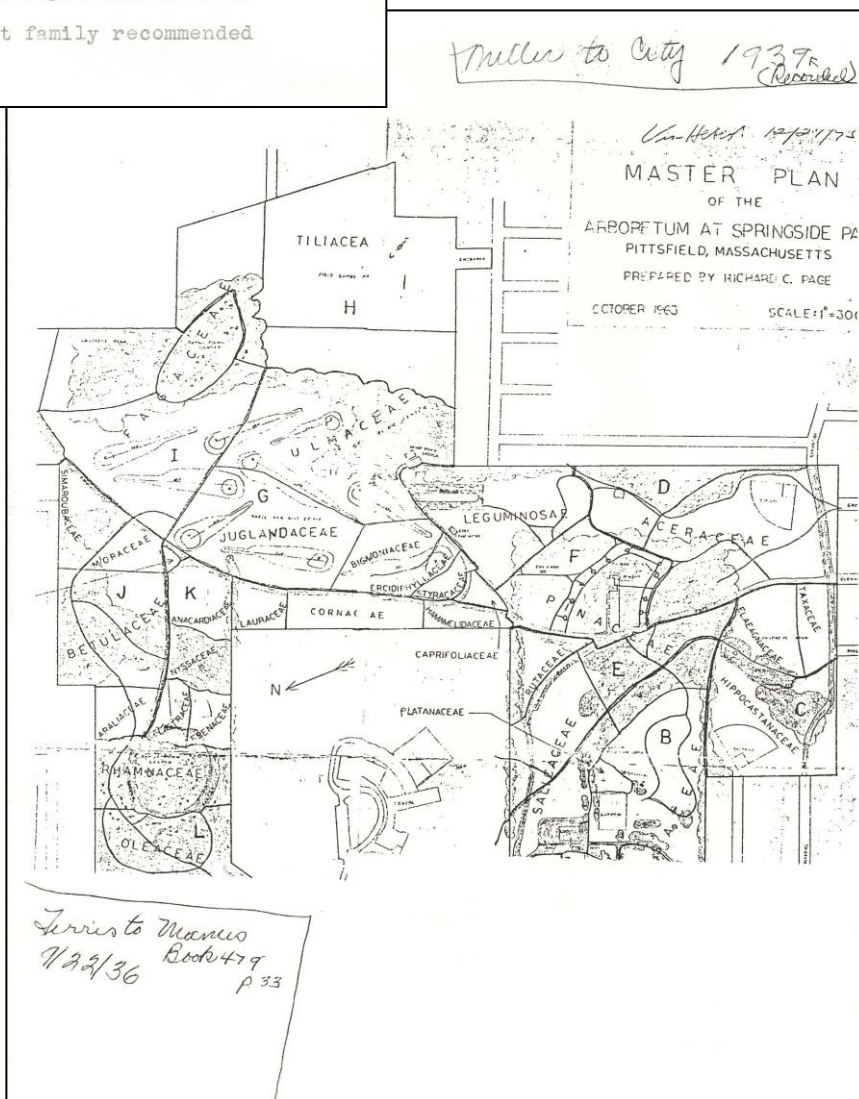
The list of trees recommended for the Springside Park Arboretum includes 34 families and 338 species and varieties.

During the preparation of this list an attempt was made to include the trees native to Berkshire County. The many trees on the list that are not native to Berkshire County were chosen with the idea of getting as wide a variety as possible of the most outstanding ornamental trees that are hardy in the region. The trees on this list should all be reliably hardy in the Pittsfield area, however, this list should not be considered complete. There are other trees that would grow in the Pittsfield climate if they were placed in a sheltered location. By observing trees growing in the Pittsfield area, it is probable that several more species could be added to the list. Perhaps the Japanese maple and some oriental cherries would survive with some protection. Sufficient room has been left between the proposed plantings to allow for the addition of species and varieties not included on the list of recommended trees.

This arboretum can be a great asset, not only to the citizens of Pittsfield, but to the entire region. It can function as a classroom where students from the nearby schools can meet to observe, study, and enjoy the wide variety of trees assembled here.

It can serve as a meeting place for garden clubs and other interested groups to see living examples of ornamental trees that can be used in landscaping the home.

It can be an area for relaxing and enjoying the beauty of nature. There will be trails through



many sections of the arboretum, however, the arrangement of the crab apples and the absence of trails in that area permit the visitor to roam at will among the trees and enjoy the beauty and fragrance of the flowers.

There is also an economic factor that is involved in this arboretum that would benefit the Pittsfield area. Tourists and visitors would come for many miles to see the outstandingly beautiful display of crabapples when they bloom. This increase in the tourist trade will bring additional income into the area.

An undertaking as ambitious as this arboretum must have the public support. An intensive publicity and educational campaign should be started and continued to familiarize the public with the goals and progress of the arboretum. Newspapers and other available news media would be very helpful in this effort. The garden clubs in the area could be very valuable supporters and quite possibly they would donate trees from time to time. The cooperation of the immediate neighborhood is also very essential if vandalism and unintentional damage is to be kept at a minimum. Perhaps support from the schools and school children could be gotten by encouraging them to participate in Arbor Day ceremonies and by founding Arborist Clubs in the schools.

#### *Procurement of Plants*

The wide variety of plants recommended for the arboretum most certainly will not be found in one or two nurseries. When seeking plant materials, it would be wise to contact the local nurseries first. If this is unsuccessful, the Weston Nurseries, Weston, Massachusetts, and the Princeton Nurseries, Princeton, New Jersey, are two nurseries with quite a wide selection of stock. If one of these did not have the sought-after plant in stock, they could probably tell you where it could be found.

A very helpful book is the Plant Buyers Guide. It lists most plants that are grown in cultivation and several nurseries where they can be bought.

#### *Planting*

Even the most beautiful tree will not grow and thrive if it is planted in poor soil. If the soil is not good, it would be wise to remove one cubic yard of soil and replace it with good topsoil or compost wherever a tree is planted. Although this will slightly increase the initial cost, it will result in healthier trees more vigorous growth and less replacement of dead trees.

Perhaps arrangements could be made with power companies and tree companies to obtain wood chips which could be used as mulch around the newly planted trees. Mulch would also make mowing easier since the lawnmower would not have to come so close to the trees. This would also result in less mower damage to the trunks of the trees.

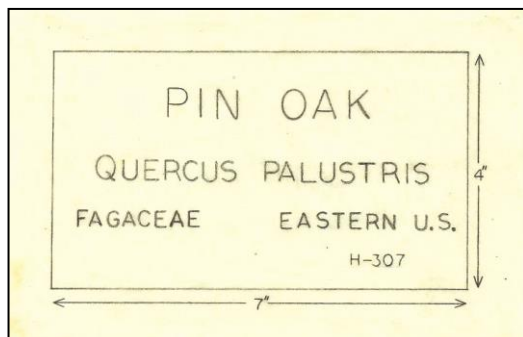
#### *Labeling of Plants*

In order to achieve the second purpose of the arboretum, that of education, each of the plants should bear a label stating the common and scientific name of the plants. It is also quite common to include on the label the family to which the plant belongs, the region of the world to which the plant is native, and the identification number of that particular plant. Hybrid plants would be so indicated.

Ideally, every tree should be labeled. However, where a grouping of the same species or variety of tree occurs, it would be permissible to omit labeling some of the individuals in the grouping.

The temporary labels presently on the trees are far from ideal, because they are not easily legible from a distance of several feet. More efficient labels should be constructed and installed as soon as this improved type of label can be used without excessive vandalism.

The following is an example of a satisfactory label.



A label of this type could easily be constructed from a wood which is decay-resistant or has been chemically treated. The lettering would be permanently grooved into the wood. The sign could be painted or left its natural color, in either case, the lettering should be painted a color that will make it plainly legible against the color of the sign.

The label could be fastened on the tree by rustproof nails or screws. However, as the tree increases in diameter the label should be moved outward every couple of years to prevent the tree trunk from growing over it. This should also be done with the temporary labels that are on some of the trees at the present time. Labels for some of the smaller trees could possibly be best displayed on stakes driven in the ground near the tree.

A project of this sort would be a good way to utilize the manpower available to the Park Department on a cold, winter day when the weather is too bad for outdoor work.

#### *Immediate Procedures*

In order that the arboretum may more rapidly become a reality, planting should begin immediately. Some of the first trees that should be planted are the groups of Canadian Hemlock near the parking lot and house, the Scarlet Oak south of the house and some Ginkgo trees northwest of the house. These trees in particular should be planted right away, so they will have time to gain some size in case the large trees presently growing near the house should have to be removed. The Carolina Hemlock hedge along the southern boundary of the park could also be planted now, so it will grow and fulfill its purpose sooner.



The trees just mentioned should not pose any problem if and when the large Elm trees, particularly those near the house, have to be removed. However, some of the proposed planting would be in the way. Simply felling trees is much less expensive than removing them limb by limb while they are still standing. So, to prevent damage to any of the newly planted trees it would be wise to plant other areas first and delay planting near the Elms as long as possible or until they have been removed. The delay in planting pertains only to the Crabapples and Pears in the immediate vicinity of the Elms and not to the trees mentioned in the paragraph above, since they would not be in the way.

As it was previously stated, this arboretum can be a valuable asset to Pittsfield and the surrounding area. So, the sooner it is developed the sooner its worth will be enjoyed by the public. I urge all possible haste toward the completion of this project.

*This memorandum below was tucked into the back of this master plan.*

## MEMORANDUM

To Mr. Vincent J. Hebert

Date May 13, 1965

Subject Springside Park

Message The enclosed page from the Berkshire Evening Eagle dated December 31, 1938 might prove a wedge to stir some of the people of Pittsfield into action. We should have had a Park years ago, but Pittsfield people are great for talking a subject to death, but doing nothing.

A great many people in the City are behind you in your efforts to get a Park for the City. Most other places have parks for the pleasure and beauty of individuals living in the area. In fact, many people travel to see some of the lovely parks.

We firmly reject the building of a High School anywhere near Springside Park. In fact, what will happen to the Berkshire Community College if and when they build. Let's hope it will be used and not stand idle for many years.

Good Luck in your efforts.

DON'T TELL IT—WRITE IT  
M 506

*(Henry W. Hebert)*

From

*Phyllis E. King  
17 Shinton Ave.*

**The Berkshire Evening Eagle**  
Pittsfield, Massachusetts, Saturday, December 31, 1938.

Page 45—No. 169

### Plan To Acquire 75-Acre Stephens Estate To Be Acquired for City

**Artist's Drawing of Stephens Property and Springside Park Area**

**President To Open Attack On Dictators**  
Fighting Speech

**75-Acre Stephens Estate To Be Acquired for City**  
Rebel Drive Slowed by Gift of Land for Park Use To Honor Kelton B. Miller

**New Dealers Paying Court To Garner**  
Vice President's

**Plan To Acquire 75-Acre Stephens Estate To Be Acquired for City**

**Artist's Drawing of Stephens Property and Springside Park Area**

**Pierce Lot 36 Acres**

**Stephens Property 7 1/2 Acres**

**Springside Park 15 1/2 Acres**

**Streets: Grove St, Glenwood Ave, Abbot St, Upper North St**

**Other labels: PONTIAC LANE, STEPHENS HOMES, ROAD**



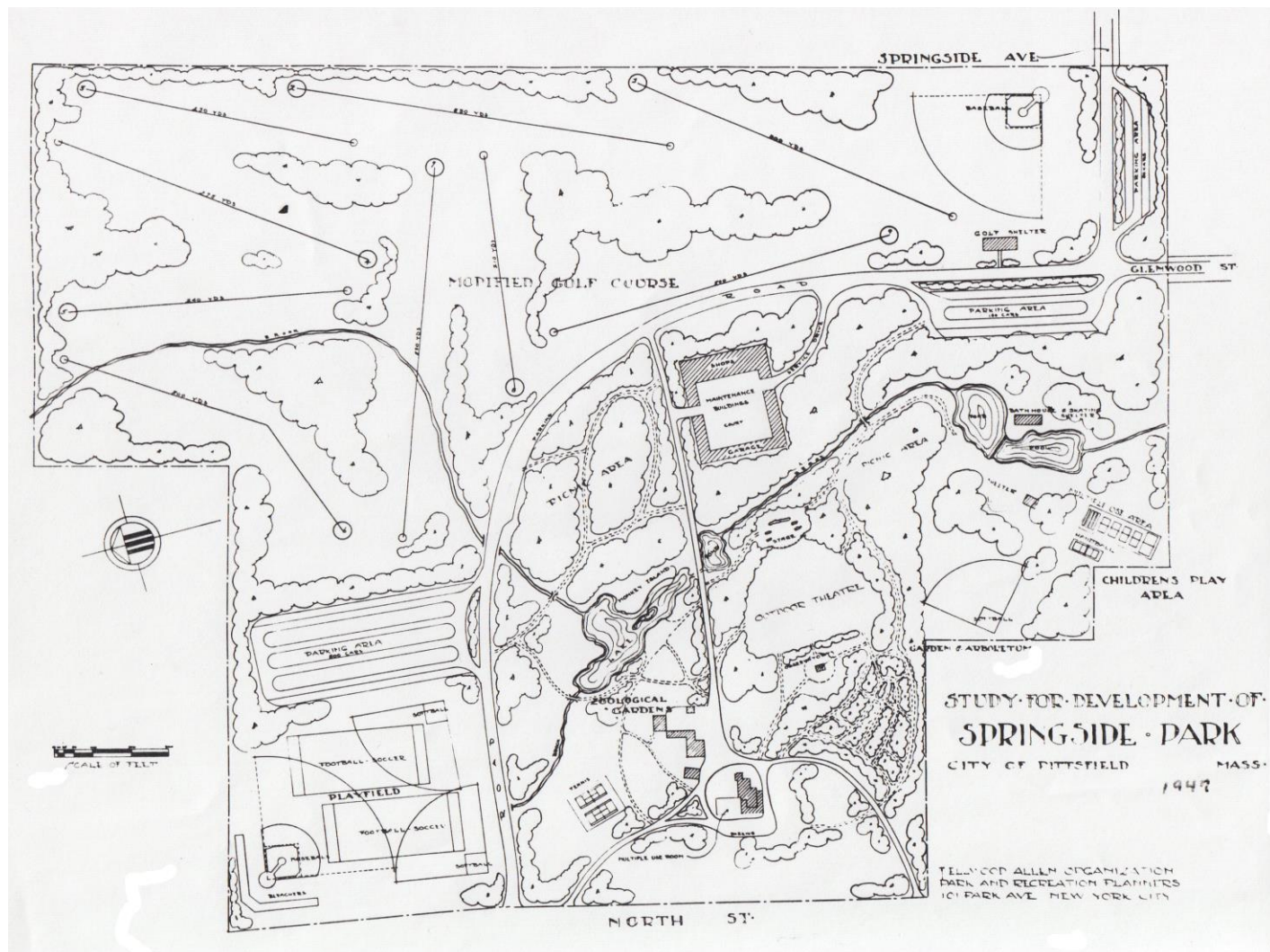
## 1947 Long Range Master Plan for Parks and Recreation, Pittsfield, Massachusetts

### *Prepared for Planning Board and Board of Park Commissioners*

Prepared by F. Ellwood Allen Organization, Park and Recreation Planners

F. Ellwood Allen and Weaver W. Pangburn, Recreation Consultants

101 Park Avenue, New York City



*Springside Park is potentially one of the most valuable properties in the city because of its size, location, topography and natural features. Little has thus far been done to develop it.*

Ward 1: The ward population is 7,958 and the number of youth 6 to 19 years old is 2030. There has been much new residential construction in the eastern part of this ward and it is one of the sections of the city where additional population may be expected.

Springside Park is very well located in relation to present and future population but is relatively undeveloped.

#### Proposals:

#1. Proposed indoor center. An addition of a recreation room at the Pontoosuc School of approximately 40' x 60' in order to improve the facilities of the school as an indoor recreation center.

#2. Development of existing park. This refers to the development of Springside Park including among other features a proposed playfield, the proposed indoor center and the improvement of an existing playground.

#### Springside

Springside Park is potentially one of the most valuable properties in the city because of its size, location, topography and natural features. Little has thus far been done to develop it.

The full possibilities of the proposals are shown in the plan on page 42a. The existing playground at Springside Avenue could be made far more effective by the introduction of additional facilities. The plan provides for a hard-surfaced multiple use area 70 feet wide by 200 feet long in the southeast corner of the playground. This facility will provide many uses. The following game courts can be painted on the surfaces: four courts for shuffleboard, two for badminton, two for paddle tennis and one for volley ball. By using portable net standards, this area can be cleared for roller skating, ice skating for small children in winter, social dances and group activities. Directly west of the multiple use area is a hard-surfaced double hand ball court.

One of the most serious problems at Springside at the present time is the physical condition of the wading pool. The pool floor should be paved in order to improve sanitary conditions. The present diversion of the water from the upper pool should be continued and the pool filled only with city water. The changes will depend on the bacteria count. As this pool is used by many children and is primarily of a swimming facility for small children it is necessary to provide some equipment for changing clothes. The plan shows a modest bath house on the east side of the pool for this purpose. This should be designed for winter use as well and serve as a skating shelter.

Additional picnic facilities should be provided in the woods on the north end of the playground.

An existing residence serves as a youth center. This use should be expanded and a full-time indoor center should be created through an addition to the building. It would be a multiple use room 40' by 60' and one-story high which could be used for dances, social parties, dinners, etc. Further redesign of the present structure is desirable in order to expand the program. The kitchen should be located adjacent to the proposed addition. Other rooms would be redesignated for special uses. The building is located near North Street but lack of light along the entrance approaches makes it difficult for night use. A lighting system should be installed along all entrance and exit drives. It is desirable to consider the provision of tables and chairs in a dining terrace in the lower area to the south of the building. This facility would be much in keeping with the other proposals.

Directly southeast of the building, a large area is set aside for a garden and arboretum. This would introduce a desirable activity in the program and create wide public interest in plants. The garden area is related to a proposed outdoor theatre located in a natural ravine. The sloping terrain will seat 5,000 and will be available to many cultural activities. Directly northeast of the central building, zoological gardens are proposed. It is not intended that these should be a large and expensive development. The interest in wild life and especially small animals will attract many people. The present farm buildings could be incorporated into the zoo, serving as winter quarters for animals and as a supply and service center for the zoo. As far as possible, all cages should be eliminated and barless pits should be provided, reproducing the natural habitats. An island in the center of a proposed lake should be set aside for monkeys, one of the limited types of foreign animals recommended for a zoo.

Directly east of the zoo, a large wooded area is designated for a series of family picnic units, each containing an individual grill, tables and benches.

The operation and maintenance of the park system will require considerable equipment. This park offers an excellent site for a maintenance and equipment center because of its size and location. The plan indicates the location of the shops, storage houses and maintenance buildings to serve the entire system. These are designed in the shape of a court so that the rolling stock, equipment and tools are concealed.

In the extreme northwest corner of the park adjacent to North Street a playfield is designated. It contains a regulation baseball diamond with bleachers, two regulations softball diamonds and two fields for football and soccer superimposed in the outfields of the diamonds. This development will require considerable grading by lowering an adjacent hill to the east. Sufficient fill will probably be available. The grading of the hill will serve another purpose of providing an organized parking area with a 500-car capacity.

In order to provide circulation in the park and to make all areas accessible, a park drive is proposed. This has an entrance on North Street and swings in an arc to an extension of Glenwood Street and Springside Avenue. Additional parking areas are provided near the Glenwood and Springside Avenue entrances.

A large undeveloped portion of the park along the east property line is set aside as a modified golf course. Public access to the private courses does not justify a municipal course. However, it is desirable to provide some facilities for beginners. This is a function of the Springside course. It will not be like a country club. The greens could be of earth. Every effort should be made to keep maintenance cost at a minimum. A shelter building near number one tee and 9 green will provide a center for golf interest and a shelter for this end of the park.

The existing ball diamond in the southeastern corner of the park should be further developed and maintained.

It will be noted that two tennis courts, among other features, are included in the park plan.

3. Development of existing playground. The Crane playground is comprised of only 1.8 acres but it is located in a populous neighborhood so that it is important to continue and further develop it. Unfortunately, it cannot be enlarged. It should be developed for intensive use by children under 18.

# 1957 Master Plan for Development of Springside Park, Pittsfield, Massachusetts

Prepared for the Pittsfield Parks Commission

*Please return to:*  
*Vincent J. Hebert*  
*874 North St.*  
*Pittsfield, Mass.*  
*4/29/57*

1957

MASTER PLAN FOR DEVELOPMENT OF SPRINGSIDE PARK  
PITTSFIELD, MASSACHUSETTS

INTRODUCTION

Springside Park, which is one of the oldest parks in the City, has recently acquired, through gift, a large acreage of property adjacent on the north. This land has great park potentialities as there are wooded sections, irregular topography and large open spaces.

The recently constructed high school is surrounded by park property on three sides. In keeping with the park-school concept it is in reality a part of the overall development. While Pittsfield has a number of important parks, there is not one single area that could be considered a park in the generally accepted meaning of the word. Most of the parks in Pittsfield are active play areas. The City needs one large area that can be developed for activities not feasible or available in the other park properties. It is here that Springside can make an extremely valuable contribution to all of the people of the City. The plan for this park in no sense duplicates facilities in other parks, but rather places the emphasis on cultural and social activities which will appeal to the entire family.

This park could be one of the finest in all New England.

## To The Parks Commission

Vincent J. Hebert, March 19, 1990

"In 1957 The Park Commission made possible the creation of a master plan for the development of Springside Park, one of the oldest parks in the City of Pittsfield and one with great potentialities because of its central location in the city, its size, its wooded section, irregular topography, and large open spaces. The plan prepared by F. Ellwood Allen Associates, professional planners, and funded by the Miller Family included such items as roads and paths; parking areas and vistas; garden and arboretum; children's play areas; children's zoo and trailside museum; day camp; golf course; group picnic center, family picnic center, athletic fields and landscaping with a design to keep the area natural with a series of nature trails and interesting walks along the brook where native plants and wildflowers would add to the grandeur and beauty of the park.

My present mission is to seek help in the planning, promotion and recruitment of workers for the arboretum, one of the principal features of the development of Springside Park.

In 1963, thirty-three years ago, the Department of Parks and Recreation was fortunate to obtain the services of a graduate student from the University of Massachusetts, Mr. Richard Page, who was working on an advanced degree in forestry and landscaping. He divided the park into various sections and designated different species of trees and plants for different areas. In fact, he included 34 families and 338 species and varieties. The overall plan was to provide a wide variety of trees for the enjoyment and education of the public.

Mr. Page stated in his plan that "this arboretum can be a great asset, not only to the citizens of Pittsfield, but to the entire region". It can function as a classroom where students from nearby schools can meet to observe, study and enjoy the wide variety of trees assembled here. It can serve as a meeting place for garden clubs and other interested groups to see living examples of ornamental trees that can be used in landscaping the home. It can be an area for relaxing and enjoying the beauty of nature. There will be trails



through many sections of the arboretum. However, the arrangement of crab apples and the absence of trails in that area permit the visitor to roam at will among the trees and enjoy the beauty and fragrance of the flowers.

There is also an economic factor involved in this arboretum that would benefit Pittsfield, as tourists and visitors would come from many miles to see the outstandingly beautiful display of crab apples and other trees and shrubs when they are in bloom. This increase in tourist trade will bring additional income into the area.

It was also pointed out in this plan that an undertaking as ambitious as this arboretum must have the public support. An intensive publicity and educational campaign should be started and continued to familiarize the public with the goals and progress of the arboretum.

With your permission, I'd like the Greenhouse Group to spearhead this project in cooperation with Pittsfield Beautiful under the guidance and direction of The Park Commission with the understanding that eventually we will welcome assistance and support from numerous interested groups such as arborists, horticulturalists, garden clubs, schools, nature lovers, bird watchers, etc., as much help is going to be needed for this grand project and we must start now!

We need to start a new campaign now for supporters, planners, promoters, workers and protectors.

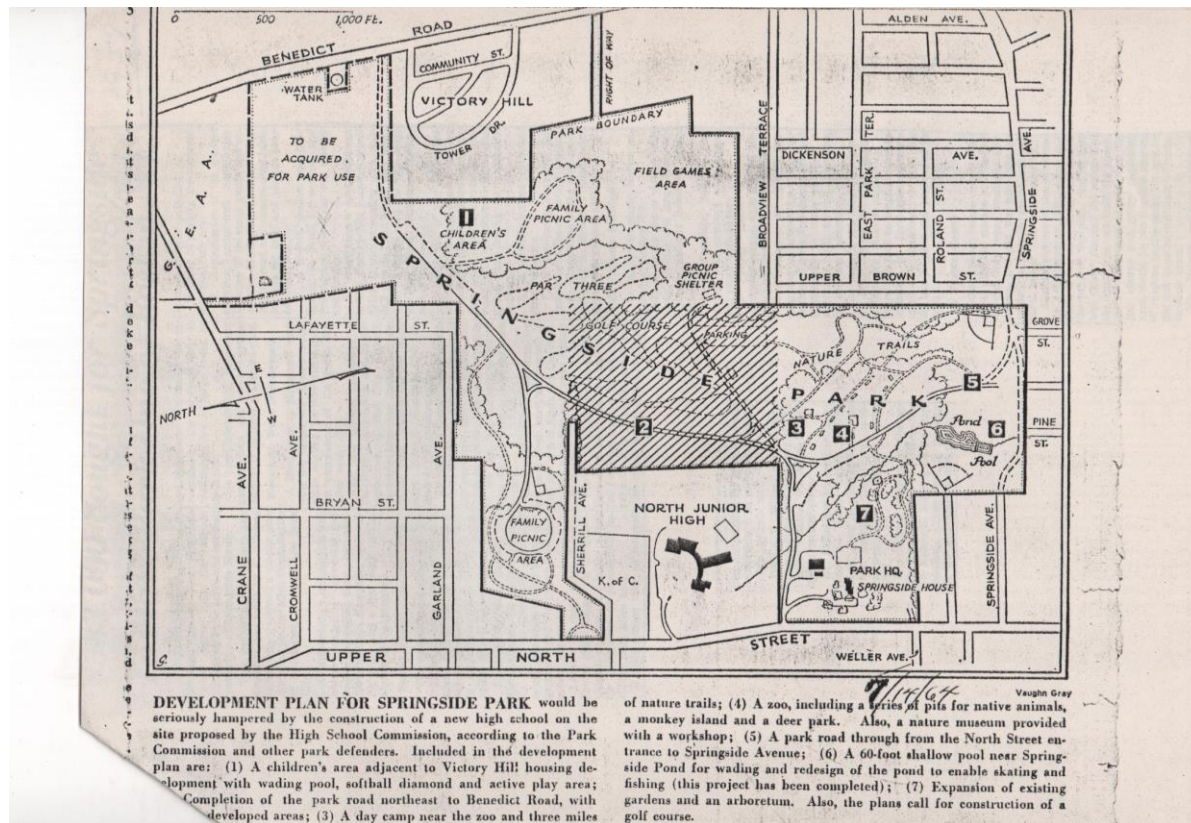
***This park could be one of the finest in all New England. At least one park in the park system of a city should have a horticultural interest and this is highly appropriate in Springside.***

### Introduction

Springside Park, which is one of the oldest parks in the City, has recently acquired, through gift, a large acreage of property adjacent on the north. This land has great park potentialities as there are wooded sections, irregular topography and large open spaces.

The recently constructed high school is surrounded by park property on three sides. In keeping with the park-school concept it is in reality a part of the overall development. While Pittsfield has a number of important parks, there is not one single area that could be considered a park in the generally accepted meaning of the word. Most of the parks in Pittsfield are active play areas. The city needs one large area than can be developed for activities not feasible or available in other park properties. It is here that Springside can make an extremely valuable contribution to all of the people of the City. The plan for this park in no sense duplicates facilities in other parks, but rather places the emphasis on cultural and social activities which will appeal to the entire family.

This park could be one of the finest in all New England.



## **Explanation of Master Plan**

### **The Circulation and Parking**

One of the present problems in Springside park is the lack of adequate circulation. With the exception of the road to the park headquarters and the maintenance buildings, there is no vehicular access to the various sections. The present park road on North Street provides a one way entrance in the southwest corner of the park. This entrance is unsatisfactory because of the grade and location. The park road simply circles the headquarter's building and returns to North Street approximately 800 feet north of the entrance.

The plan eliminates this inadequate and dangerous entrance and provides a central one at approximately the site of the existing exit. The new drive follows the old exit drive to the headquarter's building. This drive is widened for two cars and provided with a turn around at the building. Directly accessible to the drive is a 45 car parking area for public use and a smaller parking area for the use of park personnel. This entrance now becomes the main entrance to the park and the only one on North Street.

The road system is designed to serve conveniently the various use areas in the park and also to connect North Street on the west with Springside on the southeast and Benedict Road on the northeast. The fork in the road is approximately 1,000 feet from the entrance. The park has always created a barrier between the east and the west in this portion of the City, and while the proposed park road provides a connection, its design limits its use as a major thoroughfare.

In the northwest portion of the park a spur provides access to the large Family Picnic Center and in the east central portion, a spur to the Group Picnic Center and golf Course. The road width is 30 feet with intermittent 20 foot wide parking strips at strategic points having a total capacity of 200 cars.

Besides the organized parking area at the park headquarters, there is one to serve the Group Picnic Center and Golf Course with a capacity of 115 cars. The road system and parking areas are to have a permanent bituminous surface.

One other road is indicated on the plan along the south boundary of the park. This has no bearing on the part circulation and should not be considered a part responsibility. It has long been advocated in the interest of good city planning to have a direct connection between the two dead ends of Springside Avenue and a suggestion on how this can be accomplished is herewith presented.

Every effort has been made to reduce the park roads to a minimum and yet serve adequately the entire park area. While there are three entrances to the park indicated, the North Street entrance must be considered the main approach, hence the gateway design.

### **The Garden and Arboretum**

The present garden just east of the headquarters building has always created wide public interest. The proposal is to enlarge the existing gardens and develop directly adjacent to the southeast a small but practical arboretum. At least one park in the park system of a city should have a horticultural interest and this is highly appropriate in Springside. The gardens and arboretum will appeal to a great many people and, as in other cities, could well be sponsored by the local Garden Clubs.

The arboretum should contain a collection of indigenous and hardy trees and shrubs properly labelled for easy identification. Rather than a generic arrangement, it is suggested that they be grouped as to their major function. For example, plants valuable to attract birds, plants for fall coloration, plants for various seasons of bloom, a whole section devoted to unusual and little known plants, etc. thus, people will know the plant scientifically as well as its major contribution. The observatory, adjacent to the arboretum is closely related to the cultural interests in the park. The long slope to the north of the arboretum which is designed for coasting in the winter, if skillfully planted, becomes a theater of horticulture in the summer.

### **Children's Area**

There are two Children's Areas indicated on the plan. The one in the south is the present children's playground. It is proposed that the existing pond be re-designed at the south end and retained as a skating area and fish pond. By doing so a wading pool can be constructed where the water can be controlled and the depth regulated. The size of this pool will be in relation to its potential use. It is approximately 60 feet long and 20 feet wide. No other improvement is contemplated in this playground.

The other children's area is located in the extreme northeast section of the park adjacent to the Pittsfield Housing Development. It consists of a wading pool, apparatus area, softball for children and place for informal games. The wooded area can be used for outdoor art and crafts and nature study. This play area is badly needed to serve this section of the City.

### **Children's Zoo and Trailside Museum**

This is one of the major features of the plan. It consists of a series of animal pits (to avoid cages) for native animals, such as snakes, raccoons, foxes, skunks, etc., a deer park and a monkey island. The latter is one of the most popular of all small zoo attractions. The monkeys are not help over the winter but sold each fall for medical research.

The Nature Museum is provided with nature workshop facilities and space for display. It also has toilet facilities and a wing for zoo maintenance supplies and equipment.

### **Day Camp**

As part of the nature program of the City, a Day Camp is located in the vicinity of the zoo and on connecting nature trails. There are approximately three miles of trails planned for the park. The Day Camp can be reserved for a day by the various private agencies interested in such a program, such as the Y.M.C.A., Y.W.C.A. Boy and girl Scouts, Church groups, etc. This park offers wonderful natural facilities for this type of program.



### **Golf Course**

A 9 hole, 3 par Golf Course is a major feature of the plan. This course is designed for minimum maintenance with compacted sand greens and turf fairways. This type of course, which is becoming more and more popular throughout the country, will appeal to a great many people in Pittsfield. It is fine for the beginner and experienced golfer as well. The construction is simple and watering is not required for the greens, thus eliminating a major cost item.

The Clubhouse is simply a structure for toilets for men and women, a small pro shop with office for control and a maintenance room for small equipment.

### **Group Picnic Center**

Directly east of the Golf Clubhouse is a wooded area that has been set aside for group picnicking activities. A shelter building large enough to accommodate 100 or more diners is provided with grills for the preparation of food. This type of shelter building is extremely popular in many of our parks, especially in the south. It is designed for organizational use where a large number of people picnic together.

Midsay between the shelter and the Golf Clubhouse is a parking area having the capacity of 115 cars serving the two activities.

### **Family Picnic Center**

In the northeast portion of the park a wooded area has been set aside for family picnicking. This merely provides a series of tables and benches with low grills for cooking distributed throughout the area. Many people using the park will take advantage of these facilities. Tables are so located as to create privacy so that a family can picnic together without interference.

Another family picnic area is located in the northwest corner of the park. A spur from the main park road leads to this unit with ample parking facilities. Unlike the picnic center on the east, this contains a small shelter building for informal activities and toilet facilities.

### **Miscellaneous Facilities**

Other facilities indicated on the plan are as follows:

There are two regulation softball diamonds in the east central portion of the park; Two softball diamonds are indicated on the south side of the park that now exist; the school athletic field is a definite part of the overall design and those facilities are available when not required for school use.

### **Other Features**

One of the important features of this park is the matter of landscaping. Trees and mass plantings of shrubs are indicated on the plan. As this is primarily a natural area much emphasis should be placed on the landscape development of the property.

Throughout the wooded area and the picnic centers there are a series of nature trails. They are designed to provide interesting walks along the brook through the woods and in the Day Camp area. It is hoped that beside many of these trails native plants and wild flowers will be introduced, labelled with their common and scientific names and become a source of information as well as enjoyment for their beauty. There are approximately three miles of nature trails in the park. The present park maintenance facilities remain and the area is heavily screened by tree planting and shrubs.

As the main entrance to the park will be on North Street, a well designed park entrance feature should be considered. This can be in the form of a very attractive stone or brick gateway. One of the serious objections to the park at the present time is the obscure entrance.

## 1998 Master Plan: The Vincent J. Hebert Arboretum at Springside Park, Pittsfield, MA

*Prepared for the VJH Arboretum by Brian P. Gibbons, Master of Science Candidate, Urban Forestry  
Department of Forestry and Wildlife Management, 115 Holdsworth Hall  
University of Massachusetts, Amherst, MA June 1998*



**1998 Arboretum Master Plan Map**

### Part One: Introduction and Background

#### History

##### *Lineage of Property Owners*

In the early 1870's two brothers from New York decided to build an elaborate summer home in the Berkshires. William and Frank Duvol were two affluent brass manufactures and the original owners of Springside House which sits on the hill, above what today is known as North Street in Pittsfield, MA. The eclectic style mansion displays unusual architectural schemes, employing both Italianate and Mansard elements of design. Springside House has many interesting features, from ground level and the veranda with pediments to the varying roof-lines and square tower with tripartite round-top windows.

Between 1900 and 1910 the stately seasonal residence and grounds were purchased from the Duvols by Clarence Stephens, a mining engineer and operator who was also in New York. After Stephen's death Springside House was inherited by his son, Reverend John Underwood Stephens. The property remained in the Stephens family until late 1930's.

Finally, in 1939, Berkshire Eagle publisher Lawrence K. Miller and brother Donald B. Miller bequeathed Springside House and the seventy-five acre Stephens Estate to the City of Pittsfield. The generous gift was to honor their father, former Mayor Kelton B. Miller, publisher of the Berkshire Eagle. It was Kelton Miller who, between 1910 and 1912, gave the original fifteen acres for Springside Park to Pittsfield. The contribution from the Stephens Estate, along with additional land acquisitions, enlarged Springside park to about one-hundred and twenty-six acres, making it the third largest city park in Pittsfield.

Springside Park continued to grow over the years through further procurement of abutting properties. Since the original donation from Kelton Miller in 1910, eight other parcels of land were acquired by the City, increasing the Park to approximately 230 acres.

##### *Past Activities and Features at Springside Park*

In earlier years, Springside Park included some pleasant attractions that the public enjoyed daily. The Parks Commission sponsored a Band Concert soon after receiving the Stephens estate. A band stand was constructed for the event and it was reported that three-thousand people attended the show in the fall of 1939. It was reported that there was a great number of young people at the concert.



There was an Astronomical Observatory that opened in the mid-1940's and was used by the Berkshire Museum Astronomy Club. An eight-inch reflecting telescope came as a gift from Guglielmo C. Camille, a GE engineer and amateur astronomer. A wading pool was unveiled by the Pittsfield Parks Department in September of 1959 before its formal dedication to the city the following summer. Additionally, the pool was used as a public skating rink during the winter of 1959. Springside Park offered a Children's Zoo which included various creatures, such as rabbits, goats, some sheep, two raccoons, a couple of peacocks, a peahen, silver pheasants, a guinea hen, pigs and a fox. Some of the animals were on loan from private owners while permanent residents of the zoo, including the five birds, went back to Look Park in Northampton for the winter. The Springside Greenhouse Group, which operates on the property, has been very involved with the Park and has hosted various events drawing many visitors to Springside. In the mid-1870's, the Group gave tours of the greenhouse and the tulip beds which bloomed that spring. They recently began holding a seasonal event called "Springtime in the Park" which promotes gardening, ecology, and the environment. The Springside Greenhouse Group held a plant sale in 1995, with proceeds going towards repairs to the city-owned Greenhouse. Additionally, a naturalist named Victor Capelli offered classes and guided walks through Springside Park at no charge to the public.

### *Earlier Memories of Springside Park*

Springside Park has a rich heritage and offered much pleasure to a great number of people since becoming a city park in 1939. The following are written memories by three separate visitors to the park.

Florence Belcher – My fondest memories of Springside Park are the late 1970's when my grandchildren were very young. The floral display in the springtime was beautiful both inside the greenhouse with potted plants, exhibits such as an Alpine House and moving waterfall, and outside a multi-colored Tulip Garden with a windmill and other spring flowers. The zoo in the summer contained such wild animals as deer, Red Fox, Grey Fox, two raccoons (one was blind), a skunk and visiting birds and chipmunks; domestic farm animals like chickens, rabbits, geese, pigs, goats, and a pair of beautiful show-off Peacocks spreading their wings when upset and clicking their feathers and making a sound like sticks hitting each other. Occasionally, the Peacocks lost a tail feather which the children prized as an unusual gift from nature. A playground consisting of baby and older children swings and slides were available after the trip around the zoo. Other activities were biking, baseball, and kite flying. A safe area for parked cars was nearby. People could remain in the car or sit at the table and benches while supervising their children's play and safety. It was truly an inexpensive, educational, cool area to take the children after a day's work. There was a Zoo Keeper, but I never knew his name.

Martha Urban Jones – Springside Park was our summer vacation in the early 20's and 30's. We lived on the West side of the City. My oldest sister would take me, and my younger sisters there for a day of fun. We would pack a lunch and walk clear across town to get there. I remember swimming, and playing around the fountain in the middle of the pool, and looking for frogs and polliwogs in the upper pond, or go wading in the stream past the little bridge that was on the lower end of the swimming pool. Every year, at the end of summer, the Parks Dept. had a big pageant that included all the city playgrounds. One year, they had a doll carriage contest at Springside. My sisters and I found an old wicker doll carriage at the city dump. The hood was all caved in. It was in real bad shape. We picked wildflowers and Queen Anne's Lace, and poked each stem through every hole we could find on the carriage and trimmed around the edges of the hood and carriage with red Dahlias from my mother's flower garden. We had put a doll in with a large brimmed hat, so it would hide all the stems sticking down from the hood. We had to transport the carriage in a wagon so we wouldn't lose the flowers en route. When we arrived at Springside we saw all these beautiful new and expensive looking carriages. Never in a million years did we think we could win First Prize, but we did.

Thomas Smith – Its open fields bordered mostly by trees and thickets are, especially during the spring time, a pleasant place for nature excursions. And although my earliest recollections of the park date back to the late 1940's when I was taken there by cousins living in Morningside to skate, the real excitement occurred a little more than a decade later. Springside Park was an idyllic place back then, and continues to be today, for early morning bird walks during May, and an exciting place for late evening timber-doodle hunts in April. It is our twilight treks through its fields attempting to outwit the elusive sandpiper known widely as the woodcock and fondly as the timber-doodle that remains vivid in our minds to this day. My late teen years were spent bird watching, or because of its sporting and competitive nature more correctly referred to as birding, with a very special friend named Rick Oltsch who today is a highly respected science teacher in the Pittsfield School System. Living not far from the park he became, at an early age, an expert at where and when to find all kinds of birds that visited the park's varied terrain. It was Rick who suggested we embark on the night-time adventures to view the strange courtship of the woodcock, and Springside was just the place to locate and see them. It was easy to watch the woodcock from the edge of a field as a male bird, with an 18-inch wingspread would fly high in the sky over a particularly grassy spot, but for us that wasn't enough. Surely our combined intellects could outwit the timber-doodle. Rick's theory at the time was that if we squatted motionless for a while the birds would forget our presence. Then, when one took flight, rising into the night sky as high as 300 feet, we would rush to where we suspected it might or should land. Sometimes we would reach the designated place, drop to the ground on our backs and listen as the male hovered above our heads producing a series of liquid chirps before and during its zig-zag decent. After landing, and for some unknown reason never where we were, it would resume a nasal peent call reminiscent of a nighthawk's unmelodious note. We would continue, us hurrying to a different place, and the bird rising overhead in an ever-widening spiral, only to drop again, leaf-like but never where we were. We would always tire first and return home chilled and only slightly discouraged.

### *The Man Behind the Park: Vincent J. Hebert*

Vincent J. Hebert is the retired Superintendent of the Pittsfield Department of Parks and Recreation and namesake for the proposed arboretum at Springside Park. The honor was awarded to Hebert by former Mayor Anne Wojtkowski upon his retirement from the Parks Department. He originally lived in Quincy, MA and moved to Pittsfield in 1950. A dedicated man, Vincent Hebert was employed by the City from 1950 to 1990. However, even after stepping down from his post at Park Headquarters, located in Springside House, he still visits almost daily and stays very involved with park planning. Vincent Hebert has said he remembers when there was a full staff of nineteen men working for the Parks Department and Springside was in its glory days during the 1960s and running into the early 1980s. During his early years, Vincent Hebert expressed great interest in developing the southeast section of Springside Park as a landscape garden plot. In 1960 he advocated the need for at least one of Pittsfield's City Parks to promote the horticultural aspects of trees and shrubs. According to Hebert, Springside Park is an appropriate setting to plant and maintain labeled collections of hardy trees and shrubs to interest and educate the visiting public.

### *Established Gardens at Springside Park*

Since the late 1950s flower gardens have been planted on the former Stephen's estate for public enjoyment. In 1957 the Berkshire Museum Garden Club donated funds for a rose garden to be planted on the Springside property. The Springside Greenhouse group maintains tulip beds located behind the House which attracts many visitors to the Park each spring. Additionally, a formal Hospice Garden with benches and a decorative birdbath has been established in close proximity to the greenhouse. These gardens have the potential to be developed and enhanced while including them in the Arboretum Master Plan.

### *Tree Planting Traditions at Springside Park*

At Springside there is a long tradition of planting trees for park beautification, in honor of Arbor Day, and as memorials. In 1943 a total of one hundred and sixty-two Hawthorns, or *Crataegus*, made up of twenty-one separate species, were planted to improve the Parks appearance. During the 1970s various species were donated and installed at Springside Park. The Massachusetts Arborist Association gave and planted a *Zelkova* in honor of Arbor Day. In 1979 the Springside Greenhouse Group planted a European Linden and a 'Crimson King' Maple for Arbor Day. The United Way located a total of one hundred Scotch Pine, botanically known as *Pinus sylvestris*, creating a mini-forest at Springside in memory of loved ones. Additional memorial trees planted in the late 1970s include two pink flowering, weeping forms of Japanese Cherries for Mother's Day and two *Picea* or Spruce species, a *Prunus subhirtella* 'Pendula' (the scientific name for the previously mentioned ornamental cherry), an *Acer saccharum* commonly called the Sugar Maple, and a *Sorbus* or Mountain ash in honor of Father's Day. For the years to follow, many more tree species were given and planted at the site of the Vincent J. Hebert Arboretum. From 1982 to 1986, some of the species established on the property were an *Acer saccharum*, a *Ginkgo biloba* (Maidenhair Tree), a *Platanus x acerifolia* (London Planetree), a *Malus* species (Flowering Ornamental Crabapple), and a *Liriodendron tulipifera* (Tuliptree). A more recent accession into the Arboretum collection is a *Magnolia x loebneri* 'Merrill' which was planted by the Department of Environmental Management (DEM) in 1996. The community is more than willing to help the Vincent J. Hebert Arboretum acquire and plant trees.

**Previous Master Plans** In 1939 a master plan for development of approximately one hundred and twenty-five acres at Springside Park was presented by Harry J. Watson and his staff of NYA. The colorful plan was drawn by National Recreation Association. It included a junior (9-hole) golf course, car and bike drives, footpaths, playgrounds, softball fields, swimming pools and a picnic area. However, there was no mention of an arboretum or gardens to be established on the former Stephens estate at Springside Park. The development of an arboretum at Springside Park was defined in a report by Richard C. Page in 1963. Page said the purpose of the arboretum was to provide a wide variety of trees for enjoyment and education of the public. He explained how to procure plant material as well as planting procedures and labeling methods. Additionally, Page included an extensive plant list consisting of thirty-four different families and three-hundred and thirty-eight species and varieties.

The Master Plan for development of Springside Park produced in 1964 outlined ten separate park features, including a garden and arboretum. The total amount of money for the entire project was about \$384 thousand, of which just under \$15 thousand was budgeted for the construction, planting, and the walks of the gardens and arboretum. Additionally, the gardens and arboretum were last on a list of thirteen separate projects on the priority schedule of the Master Plan.

The following three pages are illustrations of previous Master Plans for the development of Springside Park.

### **The 1998 Master Plan**

#### **Background**

The initial development phase of the Vincent J. Hebert Arboretum began as a DEM grant funded project in the spring of 1997. The project was a cooperative effort between Pittsfield Beautiful, Inc., The City of Pittsfield, the Massachusetts Department of Environmental Management and the Northeast Center for Urban and Community Forestry at UMass/Amherst. A student intern, Derek Saari, majoring in Urban Forestry from UMass/Amherst inventoried and mapped trees and shrubs at Springside Park that will be included in the Arboretum's collection. In the fall of 1997, a Master's degree candidate was hired to develop a Master Plan for the Vincent J. Hebert Arboretum at Springside Park. Funding for the Master Plan report and design was provided by a grant from the DEM and additional financial contributions came from Pittsfield Beautiful, Inc. Technical and logistical support was provided by Dr. David Bloniarz of the USDA Forest Service Northeast Center for Urban and Community Forestry at UMass/Amherst.

If you would like a copy of the rest of the plan contact Hebert Arboretum 413-443-5348.



## **1999 Vincent J. Hebert Arboretum at Springside Park, Pittsfield, Massachusetts**

### **Discussion Document & Preliminary Scope of Work**

Walter Cudnohufsky, Walter Cudnohufsky Associates, May 20, 1999

*Observations and Issues, Firm Approach and Relevant Experience, Master Plan: Preliminary Scope of Work*

Pittsfield needs a regional draw and additional identity. The parklands are an incredible asset of great diversity, history, and natural interest. Large and diverse it supports a diverse constituency of users. Public interest in gardening and environmental issues is high and still accelerating. Park has a prominent public presence. Tie the future of the Arboretum to Pittsfield's own regeneration. Master plans are of two basic types: strategic and overall master plans. Master plans are both documents and a process and they require a committed client. They are critical in relation to major fund raising. They are the guides—not a restrictive prescription.

### **Vincent J. Hebert Arboretum at Springside Park, Pittsfield, MA**

#### **Discussion Document & Preliminary Scope of Work**

To: **Vincent J. Hebert Arboretum Advisory Committee**

From: **Walter Cudnohufsky, Walter Cudnohufsky Associates**

Date: May 20, 1999

#### **Contents**

- Observations and Issues
- Firm Approach and Relevant Experience
- Master Plan: Preliminary Scope of Work

#### **Walter Cudnohufsky Associates**

Box 489, Ashfield, MA 01330

413-628-4600, fax 413-628-0117, [wca@crocker.com](mailto:wca@crocker.com)

#### **Observations and Issues**

These brief notes and observations are an outline to tonight's discussion and are seen as preparatory to writing a formal proposal for master planning work. They are based on reading much of your material, reviewing the existing master plan efforts, and spending time at the Arboretum at Springside Park.

A full proposal can best be made based in response to a formal request for proposals from the Committee, after clarifying objectives and addressing some of the issues and considerations outlined below. The following notes are offered as an aid in this process.

#### **Why an Arboretum?**

The case for an Arboretum at Springside Park is compelling, broad-based, multi-faceted, and long-standing. It is based on a unique physical reality, a growing support network and an increasing public desire to understand and celebrate its natural resources.

#### **The prime values of the Springside Park lands are:**

**Existence value** – The Arboretum already exists.

**Synergistic value** – The Arboretum is interconnected with multiple park uses.

**Uniqueness value** – The Arboretum is a unique park in its natural diversity, size, history, and location.

#### **Why now?**

##### *Major reasons*

- Pittsfield needs a regional draw and additional identity.
- The park lands are an incredible asset of great diversity, history, and natural interest.
- Work on the Arboretum has begun and has a substantial, positive track record.
- The park is both large and diverse, and is supported by a diverse constituency of users.
- Vincent J. Hebert has nurtured the idea until his recent death.
- Public interest in gardening and environmental issues is high and still accelerating.
- The regional economy is good which increases the potential for near-term funding and gifting.

##### *Additional Reasons*

The volunteer organization needs credibility.

The park is underused.

There are many mature trees.

There is a growing critical mass of sustained energy from volunteers and supporters.

The site has a rich history.

The need and desire are being clarified.

There is a prominent public presence for the Arboretum (North Street).  
There are many mutually-supporting adjacent uses: housing, hospital, school, etc.

### **The Arboretum: Current Program, Mission, Goals**

#### **Program**

**Clear Priorities:** While an institution can accomplish several tasks simultaneously, it is most successful if it has a clear primary mission which it holds as a priority without exception.

If the Arboretum wishes to be both a botanical display and an educational institution it should not hold them as coequal priorities. In my experience, selecting a primary aim –for example, botanical display with a supporting goal of nature education-increases the chance for rapid progress. The same holds true if the priorities were reversed. The point is to have clear priorities.

**Program Development Tasks:** To be most efficient, the program development tasks of clarifying the goals, intent, and mission should precede the physical master plan, if at all possible. While there is much to gain from studying the site (your current Goal 2) and that information will help perfect or complete the program, it seems that Pittsfield’s needs, intent, and resolve for having an Arboretum should be clarified.

**Multiple Use:** The long-standing precedent of multiple recreational use of Springside Park complicates the goals for the Arboretum. However, multiple use is a great asset. There are many outstanding parks world-wide (especially some German city parks) where an arboretum is but one prominent component among various uses.

**Mission** (as interpreted by WC)

- Create managed vegetative displays of enjoyment, refreshment, inspiration, understanding and exercise.
- Present educational programs for land preservation, sound gardening and responsible landscaping practices.

**Goals** (as interpreted by WC)

Your Goals do reflect the big issues:

- Create a viable, defensible organization.
- Prepare a Master Plan.
- Ensure user safety and security. Make it comfortable and aesthetically pleasing.
- Secure ongoing financial support.
- Form professional alliances.

### **Implications and Questions**

#### **Primary Implications**

- Master design plan must draw from the existing situation-both physical and political/financial.
- Broad-based support is needed.
- A significant, compatible visitor draw could anchor the investment.
- Example: a conservatory or restaurant
- A physical presence needs to be established and supported by a media presence.

#### **Additional Implications**

- Non-profit status is needed
- Sound environmental practices must be demonstrated.
- Coordination with ongoing Springside Park uses is essential
- Rich heritage of historic precedents and buildings should be celebrated.

#### **Questions: A starter list**

How large should the Arboretum be? Initially and long-range?

What is the specific nature of Vincent Hebert’s dream and vision for the Arboretum?

What can be done to create the sense of safety and assure actual security for Park and Arboretum users in today’s sometimes threatening world?

What is the appropriate level of investment based on site quality and uniqueness, leadership commitment, and Pittsfield support?

How can we create discernible boundaries for the Arboretum to enhance its identity?

What ongoing uses of the Park are considered compatible with an Arboretum?

How can we actively engage the surrounding users and create a sense of ownership?  
(neighborhoods, schools, hospital)



What is going to make this Arboretum unique? Will it be regionally referenced?  
What are the primary sources for an endowment?

### **General recommendations and observations**

- **Use each segment of the Arboretum as an educational/information opportunity.**  
For example: pond rehabilitation, parking lot redesign, entry design planting
- **Try not to rely on annual fund raising and grants for the majority of the budget.**  
Develop other sources of funding.
- **Accelerate the ongoing interpretive programs, materials, and displays.**  
Go beyond taxonomy in labeling plants. Add a full-time interpreter.

#### **Physical Issues and Concerns**

##### *Primary*

- Dominance of cars and asphalt.
- Under-maintained buildings in disrepair.
- Deferred vegetation management.
- Dominance of park maintenance activities and facilities.
- Need accessible bathrooms.
- Misuse of facilities and grounds.
- Understaffing.

##### *Additional*

- Confusing entry. Disorientation.
- Street image. Barrier-like entry.
- Vandalism and litter.
- Signs appear temporary and makeshift. Incomplete information.
- Unclear and confusing boundaries.

### **What is a Master Plan?**

There are two basic types of plans: strategic and overall master plans.

Master Plans are both documents and a process.

They require a committed client.

They are critical in relation to major funding raising.

They are the guide – not a restrictive prescription.

### **Major Issues**

- Create a broad-based critical mass of awareness and seriousness in the Pittsfield community.
- Tie the future of the Arboretum to Pittsfield's own regeneration.
- Gain control over the property, the organization, and the funding.
- Reduce the leadership's concern over the magnitude of the project.
- Identify corporate sponsors and partners. (GE Elfin project?)
- Develop a compelling concept and identity.

### **Uses Proposed to Date: Examples**

Fitness trail (such as Keene Ashuelot Park)

Nature educational programs

Trails of all kinds

Skiing

Formal English garden

Demonstration gardens

Garden show

Perennial garden

Tulip garden

Hospice garden

Apple orchard

Ornamental grass garden

Lilac garden

Greenhouse well-used, but outward image needs attention.

Renewed carriage entry

Parking

City view from park (southwest corner)

Middle school programs  
Neighbors use  
Eagle concerts  
Theatre (Berkshire Stage)

### **Firm Approach and Relevant Experience**

As a firm, we are proud of our ability to work with clients as effective members of the planning/design team. WCA is very conversant with and thorough in our master planning process. Beginning with a rigorous analysis that goes far beyond normal inventory, we emphasize the development of clear compelling concepts, well-crafted programs, and logical, functional, and responsive planning and design recommendations. We are skilled in running meetings, working with multiple constituents, presenting information graphically and in convincing written form.

We would apply these and other skills in preparing the master plan for the 75 – 80 acres under your control. Working to relate the currently-defined Arboretum to the larger Park and city context we would enumerate the opportunities and obligations that come with these adjacencies. As proponents of multiple use, we believe the easiest way to protect land and resources is to use them wisely. An arboretum is one such good use.

While we have not specifically designed an arboretum, we have completed every aspect of arboretum design working with such organizations as the Berkshire Botanical Garden and Massachusetts Audubon Society, as well as many large private estates and schools. Several of these projects are included in the attached *Sample Projects* document. The *WCA Credentials* contains more information on the firm and its members.

### **Master Plan: Preliminary Scope of Work**

Master plans are wide ranging in their scope and nature. There are both complete and abbreviated plans. As a general rule, the more one studies the existing situation, the more likely that the master plan recommendations will be relevant and long-lasting. One can (and should) speculate about future possibilities. However, a real master plan is based on accurate data and existing condition maps. A master plan includes many work elements: analysis work for the following topics and many additional site attributes, analysis summary documents, conceptual designs (2 or 3), schematic design, reframed written program, public and committee responses, generalized costs, phasing, next steps, etc.

Some of the sample analysis work anticipated in this project is:

- Topographic analysis
- Sensitive and fragile system analysis
- Drainage analysis
- Water analysis
- Slope analysis
- Aspect analysis
- Ownership restrictions
- Vies analysis
- Paving and surface analysis
- Boundary planting
- Vegetation analysis
- Assets analysis
- Constraints analysis
- Building analysis

Utility analysis

- Circulation analysis
- Sun analysis
- Lighting analysis
- Sound/noise analysis
- Parking analysis
- Trail analysis
- Out of doors room analysis
- Special events and use analysis
- Service analysis
- Use conflict analysis
- Existing garden analysis
- Character analysis
- Security and vandalism analysis
- Site furnishings analysis



- Current maintenance practices analysis

#### Schedule of Fees Comments

As mentioned in the cover letter, we feel that it is premature to outline specific tasks, schedule, and fees estimate at this point. Fees and schedule are negotiable and will be based on an agreed-upon scope of work.

#### **Summary Points and Next Steps**

##### **The Arboretum appears to be a wise and logical choice**

It is easy to understand your dedication and earnestness in launching the Vincent J. Hebert Arboretum. There are ample reasons, including: a great site, ample adjacent constituents, a local and regional need for nature exploration, and a place of quiet contemplation.

##### **A dual mission has been identified, but clear priorities would help the project move along more effectively.**

Although the program is in its early stages, it has already identified two key intentions:

1. **Botanical display** – displaying vegetation in a variety of locations and garden, preferably predominantly regional in character;
2. **Nature education** – providing diverse information and opportunities for nature study.

However, choosing one as a primary and the other as a supporting secondary mission would increase the chances for rapid progress and make it easier to build momentum for the entire Arboretum project.

##### **The type, scale and level of investment needs to be determined.**

There is an evident opportunity to stretch the constituency's capacity to support the Arboretum. However, the outreach and fundraising must be done at the correct scale and quality in the initial phase, or it is unlikely to have a second phase. Take advantage of the current climate and tie the future of the Arboretum to Pittsfield's own regeneration.

##### **An endowment needs to be created.**

Don't rely on annual fund raising and grants for the majority of the budget. Develop ongoing financial support

##### **Master design plan must grow from the existing situation-both physical and political/financial.**

Time spent at the beginning in careful study of the multiple facets of the Arboretum project will be repaid in the quality effectiveness, success, and longevity of the master plan. The process itself builds understanding and commitment, and the plan can be a major tool for fundraising.

##### **The Arboretum would benefit by finding a compatible partner.**

A partner in creating visitor draw that is compatible with the use and goals of the Arboretum could anchor the investment. Examples are a conservatory or a restaurant.

A physical presence needs to be established and supported by a media presence.

##### **The task is large but measureable progress has already been made**

The focus of committee and civic attention has shown that multiple actions are necessary to successfully launch the Arboretum. Congratulations that several actions have already been taken.

#### **Next Steps**

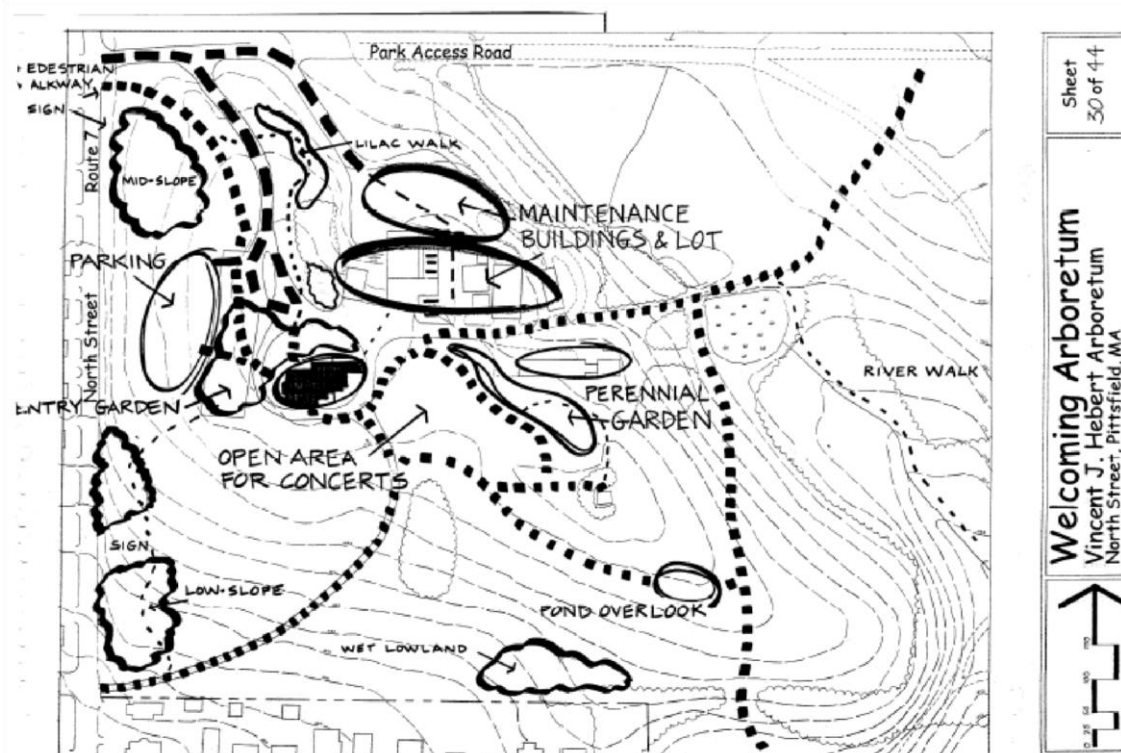
Seriously addressing these issues will lay the necessary groundwork for an effective master plan and the Arboretum's long-term's success. We are prepared to be your planning/design consultants in this process and to act as part of the team. We believe that WCA is uncommonly qualified, and would bring uniquely relevant experience, capabilities, and understanding to this important, challenging project.

## 2000 Conway School of Landscape Design

*Prepared by Carl Heide, Jennifer Luck, Judy Rice*

Visitors to the Improved Arboretum notice a difference at the southwest entrance, from the former site as they travel north. This historic stone pillars remain, but new plantings narrow the space between them, making it obvious that this is a “pedestrians only” path. The eye-catching plants attract attention, and direct people’s view toward Springside House. Further north, an opening in the hedge allows another glimpse of the grounds and a sign alerts visitors of the upcoming entrance to the park...

**2000 Conway School of Design Arboretum Master Plan** describes existing conditions of the Arboretum as including 42 acres within the city park and expands on more detailed landscaping and arboreal recommendations for this section of the park, and includes preliminary design drawings for some specific components of the landscape.



*Diagram from 2000 Conway Landscape Master Plan*



Before



After



Before



After



## **Master Plan Spring 2000, James McGrath President** **Conway School of Landscape Design (CSLD)**

### **Section 1**

**Drainage:** Meadow grasses on the hilltop east of Springside House also help to hold the soil in place. The lawn grasses on the slopes surrounding the house are not effective barriers to erosion and in fact exacerbate the erosion by acting like pavement to increase runoff water velocities.

By planting trees, shrubs, and their associated herbaceous species on the slopes in place of lawn and by letting the meadow grasses grow on the field east of Springside House, the arboretum will reduce flow of runoff into the city sewer system and the backyards [and basements] of the houses on Abbott Street. Additionally, these plantings will decrease the amount of soil erosion. CSLD Sheet 15

### **Section 1, 2**

**Circulation & Parking:** The design should separate vehicular and pedestrian traffic at the northwest corner, provide clear pathways to trails, gardens, groupings of trees and shrubs, and the lower pond, *and greater area of the park*, and relocate visitor parking. *I would add Signage is important to direct visitors at gateway to the park and that in the Children's Play Area Signage could direct visitors north, east and south.*

CSLD Sheet 21

**Historic Approach:** One-way vehicle entrance from south to north, smaller parking areas, and physical separation of DCS maintenance operations from visitors and social events.

Advantages Restoring former carriage road as entrance renews historical accuracy of landscape. Recreating grant approach from the south brings visitors towards the original front of the house first, rather than toward the 'service entrance' at the back. Visitors approaching Springside House from the south have the sun at their backs and the view of the house is bathed in sunlight, instead of having the sun in their eyes and the view of the house in shadow. Breaking the parking area into several smaller lots allows automobiles to be tucked into vegetation and less visible in the landscape. CSLD Sheet 25

### **Recommendations Phase One:**

Springside House: Staff the central hall with volunteers who will hand out information on the Arboretum. Direct visitors to gardens and collections, and greet class attendees. Continue to make space available in the meeting room on the first floor for workshops, lectures, and other public gatherings associated with the Arboretum.

Theme gardens, city overlook

Align the two existing gardens on a central axis, with the southern focal point being a set of stairs leading to the city overlook.

Transplant lilacs to west side of the greenhouse, along the trail south of the farm buildings, making a colorful and pleasant smelling gateway to the theme gardens.

Establish a path which skirts the open lawn area and leads to the lilac walk and theme gardens. Use donations to purchase granite benches for city overlook. CSLD Sheet 35

### **Section 1, 2, 3**

...the southwest corner of Springside Park...exhibits the most diversity, so this is the best place for exhibiting native Berkshire plant species in their natural associations. CSLD Sheet 7

### **Section 2**

#### **Recommendations Phase One:**

Northwest entrance: Place sign for Arboretum, Springside Park and D.C.S. in suggested location. Install a sign on Route 7, north of Park Access Road, alerting motorists traveling from the north of the entrance to Arboretum. The signs should be approximately 200' before the entrance on the right. Begin installing plants at northwest pedestrian entrance to establish an eye-catching gateway to the Arboretum. Use donations to purchase wrought-iron archway for pedestrian path.

**Elizabeth Personal Recommendation (PR):** Restoring pillars at north entrance and having both entrances have wrought iron archways would look nice and they'd have looks that relate to one another.

### **Section 3**

#### **Recommendations Phase One:**

Pond overlook: Plant white oak and sassafras trees as the focal point in the pond overlook area, establish boundaries of pond overlook. CSLD Sheet 35

## **Sections 4, 6, 7, 8**

In the wooded areas keep the large trees and native shrubs. Remove invasive exotic plants and saplings of non-native trees, allowing the native vegetation to flourish. New trees and shrubs added to the arboretum's collection, should be planted in native associations. CSLD Sheet 7

## **All Sections**

On the steeper slopes, **trails construction** must include resting areas if these locations can be made universally accessible. Resting areas provide good locations for interpretive and educational displays. Significant specimen species as well as examples of typical plant associations should be planned for the resting areas. CSLD Sheet 11

**Soils:**...install trees and shrubs in the proper site as indicated in the enclosed guide. Placement in the specific habitat that the plant requires ensures health, reduces maintenance, and informs visitors how these plants grow together in natural associations. CSLD Sheet 13

**Drainage:** Species with high moisture conditions should be planted in the seeps, and species that require wet conditions must be planted in wet areas around the stream. CSLD Sheet 15

**Wetland Restrictions:** It is especially important to protect wetlands in areas where human population density threatens groundwater quality. Wetland plant species clean and filter water and prevent erosion by holding the soil in place with their roots. The Arboretum is bisected by wetlands running north to south. Altering the land within the one hundred-foot buffer zone of freshwater wetlands requires special permitting and a review of the plans by the Conservation commission. Incorporate the wetlands into the Arboretum, demonstrating their function and value within the ecosystem, and provide information to visitors about these native plant populations.

The Massachusetts Wetlands Protection Act defines freshwater wetlands in terms of vegetation and hydrology as follows: "Wet meadows, marshes, swamps, bogs, areas where groundwater, flowing or standing surface water or ice provide a significant part of the supporting substrate for the plant community for at least five months of the year; emergent and submerging plant communities in inland waters; that portion of any bank which touches any inland waters."

CSLD Sheet 17

**Sun and Shadow:** Different plant species have differing light requirements. Some species require a great deal of light and only grow best in open conditions. Other species tolerate even heavy shade conditions. Sun and shadow patterns indicate where different species of trees and shrubs should be planted based on their light requirements.

Additionally, the availability of sun and shade affect human activities, so the Arboretum must have a variety of sunny and shaded places for people to enjoy. CSLD Sheet 19

**Views:** The Arboretum Master Plan should emphasize pleasant near and distant views and should emphasize pleasant near and distant views in the landscape. CSLD Sheet 23

**People and Plants:** Large areas for native Berkshire plant associations with pathways to take people to and from the plantings. Visitors' experience the view of Springside House as its original owners experienced it.

Advantages: Pathways connect present and future plant associations and lead people to other sections of the Park. Large areas for displaying plant associations. Resting areas take advantage of the views of the mountains; close views are enjoyed from sitting areas within the associations. An additional vehicular entrance. Parking within 200' of Springside House. CSLD Sheet 27

**Welcoming Arboretum:** Connections between tree and shrub associations, Springside House, and other park groups are made clear to visitors.

Advantages: The northwest Entrance includes a pedestrian walkway which separates visitors from vehicles. The main attraction at the top of the hill, whether arriving by car or foot, is Springside House with its welcoming garden. Plantings within the garden shape spaces that direct visitors to the new plantings of trees, the concert area and park trails. A new pond overlook area is visible from Springside House. The trees in the meadow draw visitors to the site; from there they can view the lower pond. Trails connect groupings of trees and shrubs to each other, Springside House, theme gardens, and the pond overlook. The new parking lot is north and west of the existing lot and at a lower level, out of direct view from Springside House. CSLD Sheet 29

**Elizabeth PR:** Restoring the frontage by removing excessive barrier plants selectively and installing a meandering gravel path that winds around large bushes and trees could look nice. The path could be planted with successive tiers of bushes and shrubs that flower during each season providing an entrance display of continual seasonal color that will attract the person driving by.

## **The Improved Arboretum**

Visitors to the Improved Arboretum notice a difference from the former site as they travel north on Route 7 at the southwest entrance. The historic stone pillars remain, but new plantings narrow the space between them, making it obvious to motorists that

this is a “pedestrians only” path. The eye-catching plants attract attention, direct people’s view toward Springside House at the crest of the hill. Further north, an opening in the hedge allows another glimpse of the grounds, and a sign alerts visitors of the upcoming entrance at the northwest corner.

The new sign at the northwest entrance is placed 5’ from the roadside in clear view of oncoming traffic. It displays the names of Springside Park Vincent J. Hebert Arboretum, and the Department of Community Services.

A pedestrian entrance and walkway with attractive blooming plants attracts attention, while providing safe access to the Arboretum. The pedestrian walkway leads visitors between a silver maple alley up to Springside Park, keeping them safely separated from vehicular traffic.

A bus stop and benches provide people without cars a safe and attractive entrance.

Visitors arriving by car drive south to the top of the hill where a new parking lot awaits. The lot is north and west of the former lot, forming two terraces which keep it sheltered from the main view from Springside House. The move also keeps the view of the lot from dominating the scene at the top of the hill. In addition, the area opened up to the south is now a welcoming entrance garden, an assembly area for large groups, and a sitting area with views of the city and mountains.

The walkways connect the parking lot to the assembly area, sitting area with views, and Springside House. These paths are A.D.A. approved, and comfortable for elderly visitors as well as parents with baby strollers.

Once people enter Springside House, they are greeted by volunteers who give out Arboretum maps, direct them to classes and workshops, or tell them a little about the history of Springside House and the grounds.

The information desk may also have books for sale, and other items pertaining to education and enjoyment of the Arboretum.

The south door leads people to a path which connects to the concert and social area. Summer band concerts, a Capella singers, weddings, and private parties are comfortably accommodated here. The scent of lilacs draws visitors through the lilac walk and beyond to the formal gardens.

A stone staircase leads to the city overlook with spectacular views of Pittsfield and the Taconic Range to the south. To the north, people can enjoy the sights of the theme gardens from a bird’s-eye view, and the sounds of the music at the social area below.

A shady, cool area under a mature spruce grove awaits visitors. From this vantage point, people can enjoy views of the city and mountains, the meadow, and Springside Park to the east. To the southeast, a mown path invites adventurers directly into the meadow to experience butterflies up-close. Ahead, a grove of newly planted oaks and sassafras provides a spot of shade amidst the meadow. This is the pond overlook, with views of the lower pond, Springside House in the distance, and the meadow and park all around.

Along the south boundary of the property, new trees and shrubs are grouped by natural association. Pathways cut in and out of the groupings, with places to sit among the trees to increase appreciation of these plants. The path meanders through a wet lowland where moisture-tolerant species will thrive. This path connects with the southwest pedestrian entrance, completing a short loop back to Springside House.

From the southwest entrance, neighbors can take the trail which runs parallel to route 7 through more newly planted trees and shrubs. This path is a pleasant alternative to a city sidewalk, which is lacking on the east side of route 7. The path encourages local people to experience the Arboretum, even if it may be only to “cut through” on the way to their neighbor to the north of the site. School children from Reid Middle School may take this path home from school, avoid walking along a busy street, and learn about the natural world as well. CSLD Sheet 31

## **Recommendations Phase One CSLD Sheet 35**

### **Springside House (Section 1 & 2)**

- Staff the central hall with volunteers who will hand out information on the Arboretum, direct visitors to gardens and collections, and greet class attendees.

- Continue to make space available in the meeting room on the first floor for workshops, lectures, and other public gatherings associated with the Arboretum.

- Move the apartment on the east side of the house to the second and third floor, making first floor space available to DCS office {or other offices}.

### **Theme gardens, city overlook (Section 1 & 2)**

- Align the two existing gardens on a central axis, with the southern focal point being a set of stairs leading to the city overlook.

- Transplant lilacs to west side of the greenhouse, along the trail south of the farm buildings, making a colorful and pleasant smelling gateway to the theme gardens.

- Establish a path which skirts the open lawn area and leads to the lilac walk and theme gardens.

- Use donations to purchase granite benches for city overlook.

### **Pond overlook (Section 3 & 5)**

- Plant white oak and sassafras trees as the focal point in the pond overlook area, establish boundaries of pond overlook.

### **Northwest entrance (Section 2)**

- Place sign for the Arboretum, Springside Park, and DCS in suggested location



-Install a sign on Route 7, north of Park Access Road, alerting motorists traveling from the north of the entrance to Arboretum. The sign should be approximately 200' before the entrance on the right.

\_Begin installing plants at northwest pedestrian entrance to establish an eye-catching gateway to the Arboretum

-Use donations to purchase wrought-iron archway for pedestrian path.

#### **Southwest entrance (Section 3 & 5)**

-Remove 'no parking' sign and bollards between stone pillars

-Plant shrubs and perennials between stone pillars indicating to motorists that this is a 'pedestrians only' path

-Install sign announcing entrance to Arboretum 100' north from southwest entrance. The sign will be placed to the north of the area that is to be cleared of shrubs, allowing a view to Springside House from Route 7.

#### **Memorial trees, donated plants (All Section)**

-Do not accept donations of plants. Rather, have interested parties choose from the enclosed list of trees and shrubs in order to establish the Arboretum's unique collection of plants

-Install the donated plant directly in its designated spot, as indicated on the plant by number chart. This will eliminate the need for a nursery, and save space, labor, and time. Planting directly in the landscape also begins to show how plants grow together and increases the educational potential at the site.

#### **Existing species (All Sections, 1 & 2)**

-Rid the site of invasive exotic species and keep it free of these species.-Enlist the

-Remove shrubs from 50 to 100' north of SW entrance to open up view to House from Route 7. The area opened up should be 50' wide.

#### **Observatory (Section 1 & 2)**

-Place informal granite seats on the ground in proper locations that take best advantage of views to park, meadow, and city.

#### **Meadow (All Sections)**

-Increase meadow by allowing grasses to grow in designated areas.

#### **Miscellaneous (Section 1 & 2)**

-Move theater trailer to Parks Dept. maintenance lot.

#### **Recommendations Phase Two CSLD Sheet 37**

-Continue increasing varieties of trees and shrubs and install them in designated areas according to chart

-Build stone wall surrounding theme gardens.

-Add more seats in resting areas.

-Hire a Landscape Architect to assess vehicular entrance to Arboretum, as well as review plans to shift parking lot to west.

-Build stone wall around pond overlook area.

-Install an ADA approved restroom on the first floor of Springside House.

-Hire a consultant to assess feasibility of a cafe including kitchen facilities for catering events.

-Begin to carry books, gifts, and gardening supplies to be sold at the main hall desk.

-Assess the prospect of having a seasonal fresh-air café on the west porch.

-Raze the garage stalls on the east side of the barn with cupola. This newly opened area will be convenient extra parking for DCS, which will have its own corridor from the east side of the house to the parking area, separated from public access.

-Build stone staircase from theme gardens to city overlook.

## **2000 Management Plan for Hebert Arboretum At Springside Park: Expansion and Interpretive Trail Plan**

*Prepared by Dr. David Bloniarz and Brian Kane*

*University of Massachusetts at Amherst, November 1, 2000*

The backbone of the management plan is an interpretive trail that starts at Springside House and leads visitors through the various plant communities and ecosystems throughout the park. The management plan concentrates on designing the arboretum as an educational tool attracting visitors and enlightening many people about the natural world. It encourages a multiple-use park.

### **Hebert Arboretum at Springside Park Management Plan, June 9, 2000**

The Hebert Arboretum of Springside Park has several components, a collection of specimen trees, a grassland/wildflower meadow, pioneer regeneration edges, wetlands, bogs, and a set of forested trails. Currently, the arboretum is divided geographically, with the specimen trees located mostly west of Springside House, the grassland/wildflower meadow primarily south of Springside House, the forest and wetlands east of Springside House. Pioneer edges occur around the grassland/wildflower meadow and in an underdeveloped area north of Springside House and east of Reid Middle School. Previous work surveyed the specimen trees in the ten acres mostly west and southwest of Springside House. The current project is concerned with the 30 acres south and east of Springside House, comprised of the habitats described above. The management suggestions detailed herein intend to focus time and funds on developing the Hebert Arboretum. The backbone of the management plan is through the various plant communities and ecosystems. As one travels the path, they will learn about the different ecosystems through signage and a trail guide. Given that Springside Park contains an eclectic collection of habitats, the trail will serve to educate visitors about the various plant communities and how ecosystem processes affect the flora and fauna of an area (on both the macro- and micro-scales). After discussing management options for each plant community, the report will develop the interpretative trail as the final section, tying all the communities together. The management plan is divided into sections that correspond to the geographical divisions notes above; each section of the arboretum will be addressed individually. The final part of the management plan will bring the different arboretum sections together and discuss the merits of managing the arboretum in this fashion. Non-native species can be found in all the natural areas, probably as a result of planting during the period when Springside House was maintained as an estate.

The management plan concentrates on designing the arboretum as an educational tool. Attracting visitors from Pittsfield and other parts of Western Massachusetts, the Hebert Arboretum has the potential of enlightening many people about the natural world. The aesthetic appeal of trees and shrubs is only one aspect of this education. Additional considerations include the benefits of trees in urban and suburban areas, the diversity of habitats and plant and animal communities that exist, and the ecosystem processes that occur all around us.

Bordering the grassland/wildflower meadow on the south and east is a forest edge. To the south, the edge is only a border of regenerating trees and shrubs, with a few specimen trees interspersed (the large, specimen trees were likely planted as lawn trees when Springside House was managed as an estate. To the east, the forest edge leads into a mature upland hardwood forest. Succession is an important ecosystem process, whereby plants grow and alter their environment (dry leaves, for example, are decomposed and recycled back into the soil). Environmental alteration facilitates the growth of other plants, which supersede the first plants. This process continues until a disturbance drastically alters the environment and the process begins anew. The Massachusetts' landscape provides an excellent example of succession at work.

In Massachusetts, the landscape was primarily forest before European settlement. Native Americans in Massachusetts cleared some land for hunting and farming, but this was primarily on a small scale. As European settlement continued and progressed west, more and more forest was cleared for farmland. Deforestation continued until agriculture reached its pinnacle circa 1840. As colonists moved west, Massachusetts became less and less viable for farming, and farms were abandoned circa 1850. Farmland, with its open fields and previously-tilled soil, became the site of succession in Massachusetts. Open fields provide seed beds for grasses and forbs, which can quickly colonize open areas. Trees such as white pine (*Pinus strobus*) and grey birch (*Betula populifolia*) also quickly colonize open fields because they produce copious seeds, which can cover large areas. White pine colonized old farm fields and covered much of the Massachusetts landscape by the early 1900's. As the pioneer trees drop their leaves each fall, and as branches break and fall to the ground, decomposition begins and the leaves and twigs and branches are broken down and recycled back into the soil. As decomposition continues, over time a layer of organic matter (old leaves and twigs in various stages of decomposition) accumulates, increasing the nutrient content of the soil. When the white pine forests of Massachusetts were harvested starting in 1909, they left behind a rich, organic soil, perfect for colonization by the next successional group, hardwoods. The oaks, maples, birches, and beeches that dominate much of Massachusetts' forests today began growing during this

period. The final component of succession is disturbance. In Massachusetts, the major disturbance is wind; the 1938 hurricane is a good example. The hurricane of 1938 toppled many hardwood trees in Massachusetts' forests, allowing succession to start all over again.

The forest edge around the grassland contains several pioneer species and edge species. Edge species are significant because today building development fragments the forest and creates edges. In ecology, edge refers to the area between two different kinds of habitat; forest and grassland, for example. Edges support a specific community of plants and animals; in Massachusetts, a common edge species is the white-tailed deer. Blue jays, grackles, and catbirds are also edge species.

Unfortunately, edges indicate forest fragmentation, a frequent consequence of development, in which unbroken tracts of forest are divided into smaller areas. Some species that need unbroken forest tracts cannot survive in the smaller patches of forest as such, by periodic cutting of trees, to exhibit this plant community.

A second area east of the pool also contains several pioneer tree species. Previously, the area was a lilac garden and several lilac plants remain. Around the pool and the pond just north of the pool, however, native wetland and successional plants are reclaiming the area. Birches and poplars are growing in the rocky soil, and willows are growing around the pond. This area illustrates that many types of natural areas exist, not just forests. Where wet soils exist, different plants thrive; the dominant hardwoods of the upland forest cannot survive in wet soils, so the less shade tolerant willows use this space. It is important for visitors to understand plant competition and how different growth factors affect the plants in a given area. Plants need sunlight, water, and nutrients to grow. Some trees tolerate shade; they are very efficient gatherers of light.

Nature's canopy trees, the trees that dominate a forest, tolerate shade well. Successional trees, on the other hand, need full sunlight to grow, but they can live on soils with low nutrient content. The trees that colonized abandoned farm fields fall into this category. Other trees tolerate wet soils, growing where waterlogged soils prevent many dominant hardwoods and pioneer species from occurring. The trees around the pond (and in the upper ponds) exemplify this last category.

Highlighting the different areas of the arboretum, and plant communities with which they are associated shows visitors the variety of natural habitats that exist in an ecosystem. Unless the remaining lilacs (*Syringa vulgaris*) can be rejuvenated to good health, they should not become a focal point of this area. Their current condition is generally poor to fail, and they do not qualify as specimen shrubs. As with the previous successional area, the successional trees and shrubs should be cut periodically, preventing succession from taking the next step, and preserving the area at an early stage of succession.

Walking east from the pond, one encounters a series of trails that lead mostly north through deciduous woodlands and wet areas. The deciduous woodlands are typical of a Western Massachusetts forest containing several typical northern hardwoods and typical understory trees as well. The area represents the stereotypical plant community one associates with a "forest".

Within the forest, through more refined plant communities can be found. The "forest" is more than a collection of trees. With directions, one can realize the usual assemblages of plants, and how the assemblages can be used to determine environmental factors, like climate and soil. Additionally, there are several specimen trees along the trails, noteworthy for their size, shape, or unusual species. Specimen trees need to be highlighted to help visitors to comprehend their impressive characteristics. This can be accomplished by pruning individual trees to enhance their form and pruning or removing nearby trees to enhance views of specimen trees. Care should be taken not to haphazardly remove all other plants growing near specimen trees; it is important to understand that plants grow together, in a community, not in isolation. For future use, the management plan must also address trees to replace the specimen trees as they die or break apart in storms. Younger trees that show signs of good health and vigor must be selected to replace the current specimen trees. Trees chosen as replacements should be monitored closely for signs of decline or health problems in order to safeguard them as investments for the arboretum's future.

Continuing north along the main trail, the hiker finds more wet areas, with fewer mature deciduous trees. The plant communities gradually change, reflecting the change in soil condition. Wetland plants comprise a whole community that is underutilized in landscapes. The wetland areas around the upper pond illustrate another unique plant group. There are a few specimen trees in this area worthy of exhibition.

At the northeast corner of the 30 acres currently under consideration, an old road is lined with mature sugar maples (*Acer saccharum*) and 2 American elms (*Ulmus americana*). Many of the trees here require hazard reduction pruning, to remove dangerous dead branches and unsafe trees. With proper maintenance, the trees could become a focal part of the arboretum. Two important management considerations apply to all of the areas described above. First, trails must be maintained if the arboretum is to attract and retain visitors who want to learn about trees and plant communities. Many of the trails presently are in poor condition; accessibility is limited to dry times or when there is no snow cover. Additionally, bridges that cross the brook are in poor condition from vandalism. Vandalism must be reduced if the management plan is to be implemented. The interpretive trail requires some type of demarcation to correspond to a trail guide or map; if vandalism continues, the trail will lose its appeal. Recruiting young people to help in the construction and maintenance of the trails might be one way to reduce the occurrence of vandalism. Trails should be covered with wood chips where possible to reduce soil compaction. In areas of steep terrain, steps might be considered to reduce trip hazards.

The second general consideration is the removal of non-invasive species from natural areas. Several non-native invasive species exist on the arboretum grounds, including Tartarian honeysuckle, (*Lonicera tartarica*), glossy buckthorn (*Rhamnus frangula*), Norway maple (*Acer platanoides*), Oreintal bittersweet (*Celastrus orbiculatus*), multiflora rose (*Rosa multiflora*), and Common barberry (*Berberis vulgaris*). Each of these plants has the potential to colonize an area to the exclusion of all other plants. In the 30 acres currently under consideration, most of the plants listed above are not found in large populations in natural areas. Some individuals are growing in natural areas, and some other invasive species are planted as part of the landscaping of Springside House and in the arboretum proper. The invasive species listed above all can reproduce in great quantities, expediting colonization of susceptible areas. It is thus imperative that incipient populations of the invasive be removed as soon as possible.

Finally, to the extent possible, all labor should be performed with volunteers. Local citizens, school children, and boy and girl scouts are all excellent labor pools. Local schools could offer academic credit for performing trail maintenance, scouts could receive merits for pulling invasive trees and shrubs from the forest, and local citizens could serve to direct management activities (as currently occurs with the Hebert Arboretum board of directors). The management plan outlined above will require an initial investment of time and money and annual contributions for maintenance.

February 10, 2000

#### Student Report Intern Activities

Dear Arboretum Committee Members,

Brain Kane and Jonathan Baehr traveled to Springside Park on January 20th to conduct an inventory of the trees found growing in the area of the park which is proposed for expansion of the VJ Hebert Arboretum. Data from those field visits are currently being prepared for inclusion in a recommendation report for the Arboretum, as well as for use in the proposed training workshops which will be offered in the spring. Enclosed please find a rough draft of the initial investigation. These initial notes contain only a portion of the site. The remaining field notes will be put into digital form in the next few days. All of the vegetation will be noted on a map or air photograph and could form the basis for an informational/interpretive document that can be used for training or distributed to Arboretum visitors.

Additionally, Brian Kane has developed DRAFT outlines for several training sessions that may be offered to residents and visitors. I will be reviewing these documents and Brian will revise based on my feedback. We will then forward them to the Committee for review and final revision.

I have enclosed the draft of the initial investigation completed by Brian and Jonathan. It is in very rough form, and reflects a narrative approach to the field notes. I will be reviewing and revising these notes, and the remainder of their field notes, over the next few days, and will forward the final draft to you. The committed can then review and revise as necessary.

Jonathan and I expect to be travelling to the Arboretum at the end of the month in order to complete further vegetation review and to confirm the development of our reference maps. We also hope to be in contact with members of the Arboretum Committee in the next few weeks to request assistance with training, additional data collection and other input into the project.

I will keep you posted on progress, and look forward to moving forward on this initiative.

Thanks, David Bloniarz,

David V. Bloniarz, Ph.D.

USDA Forest Service Northeast Center for Urban & Community Forestry

Department of Forestry & Wildlife Management

Holdworth Natural Resources Center

University of Massachusetts, Amherst, MA 01003

413-545-3755

[bloniarz@forwild.umass.edu](mailto:bloniarz@forwild.umass.edu)

<http://www.umass.edu/urbantree>



## **2000 Management Plan for Hebert Arboretum At Springside Park: Expansion and Interpretive Trail Plan**

*Prepared by Dr. David Bloniarz and Brian Kane*

*University of Massachusetts at Amherst, November 1, 2000*

Acknowledgements: The authors wish to acknowledge the following individuals whose assistance contributed to the success of this project. Members of the Hebert Arboretum Board of Directors; especially Harvey Sides, Bill Carrigan, Bob Presutti, Jim McGrath, Ken Gooch, Bill Florek; Jake Baehr provided valuable help collecting data Ryan Robicheau provided GIS support and digitized the trees and trail maps into the GIS map; Dennis Ryan provided technical assistance and guidance,

### **Introduction**

The Vincent J. Hebert Arboretum at Springside Park in Pittsfield, Massachusetts is a burgeoning arboretum that highlights various specimen trees and plant communities. In a 1998 master plan, Gibbons detailed many aspects of the arboretum's natural and social histories, ecology, design, and future plans. The master plan also contains inventory information for the landscape trees in the ten acres immediately south and west of Springside House, the main building on the grounds of Springside Park. Prior inventory work at the arboretum cataloged and assessed the trees planted as part of the landscape of the park. The master plan offers suggestions for use of remaining space in Springside Park relevant to the expansion of the Hebert Arboretum.

The most recent development in the arboretum's history is the master plan for 30 acres of Springside Park east and southeast of Springside House. This area consists of various plant communities and geographical features. The geographical features include ponds at the north and south ends of the main trail that runs north/south along the east border of the 30-acre parcel (refer to map in appendix). The trail heads through mostly deciduous woods east of Springside House, although wetlands and regeneration forest areas do exist as well.

The master plan described herein focuses on management of the 30-acre parcel described above. For topographical, geological, and design information, consult Gibbons' 1998 Master Plan. The current document creates a plan for managing the 30-acre parcel as an educational tool to help visitors understand the environment better. The Hebert Arboretum has the potential to offer a unique dual perspective. If landscape trees, those worthy of note for planting in yards or as street trees, and to show how native plants function together as part of a community and ecosystem. This perspective is invaluable because as more people gain a better understanding of the connections between plants, animals, natural features of topography and geology, and humans, the better we will be able to manage our own landscapes and towns. Visitors will learn about the benefits of urban trees and greenspace and will learn how to keep trees as assets, not allowing them to become liabilities.

This document consists of two sections, first an overview of the management plan for the arboretum, including a proposal for management of possible future acquisitions to the arboretum. The second section outlines an interpretive trail to lead visitors through the 30 acres presently under consideration. Along the trail, various stops serve to illustrate various aspects of tree growth, tree use in developed areas, trees as part of a plant community, and trees as part of a functioning ecosystem. Before presenting the management plan, a review of the benefits of urban and suburban trees is offered.

### **Benefits of Urban Trees**

Trees provide many benefits, in a landscape or developed setting, their benefits are just as important as in a forest setting. Tree benefits can be divided into two main groups, tangible and intangible. Tangible benefits include pollution reduction, climate amelioration, runoff and erosion reduction, property value enhancement. Intangible benefits include aesthetic values and social and psychological values.

Trees help clean the air of particulate and gaseous pollutants, in addition to "inhaling" carbon dioxide and "exhaling" oxygen. Some trees are less susceptible to airborne pollutants, gaseous and particulate, and they are better suited to urban environments. Most trees decrease particulate pollution by cut leaves and stems. When the leaves fall, the particulate pollution goes with them to be mulched. Some air pollution, like ozone, can damage trees and tree damage can indicate poor air quality. Some gases are more readily absorbed by trees; a study done in Russia found that ozone, sulfur dioxide, and nitrogen dioxide were reduced over 8 hours by 80%, 70% and 67% respectively, by a forested area. The production of oxygen and consumption of carbon dioxide during photosynthesis can help reduce the "Greenhouse Effect" arguably caused by industrial carbon dioxide production.

Trees also buffer temperature extremes in the summer and winter. With acres of paved surfaces, cities have been described as "urban heat islands" because their temperatures can be ten to fifteen degrees above suburbs and rural communities. In the summer, trees can reduce the heat island effect by blocking sunlight and shading houses and buildings. Temperatures under a forest canopy can be up to twenty degrees cooler than areas exposed to full sunlight, similar temperature decreases were found in California homes when trees were shading the house. In the winter, trees can serve as a windbreak and insulation when planted on the north side of a house or building.

Because trees provide help in reducing air pollution and mitigating temperature extremes, they are an asset to the urban landscape. From a cost/benefit analysis, a study of the Chicago urban forest found that while the cost of planting 95,000 green ash trees (*Fraxinus pennsylvanica*) totaled \$21 million, the savings on energy costs and air pollution mitigation amounted to \$54 million, for a net economic benefit of \$38 million, or \$402 per tree (over a 30 year period).

Trees also reduce runoff from precipitation, which pavement does not do. Consequently, they decrease the amount of erosion that occurs from precipitation because they slow water down and prevent it from washing away soil from around their roots. Finally, trees provide an economic benefit from their well-known property value enhancement. Property values are raised up to 20% when

trees are present on a yard and this increases municipal income through assessments. Many high income homebuyers were quite willing to pay more for landscape amenities such as stately trees. Concerning intangible benefits that trees provide, trees are pleasing to see, they provide solace and encourage community togetherness. Studies have shown that hospital patients recover more quickly when they have a view of trees from their rooms. Many community groups, like Trees New York, sponsor volunteer pruning and planting programs to help maintain a community's trees. When residents work together to plant or trim trees in their neighborhood, they feel an attachment to the trees and are more likely to monitor them carefully. Volunteer initiatives also serve to heighten awareness of the need for and benefits of trees in a community. The Hebert Arboretum can serve these same functions for the residents of Pittsfield and the visitors to the arboretum.

### Management Plan

The Hebert Arboretum of Springside Park has several components, a collection of specimen trees, a grassland/wildflower meadow, pioneer regeneration edges, wetlands, bogs, and a set of forested trails. Currently, the arboretum is divided geographically, with the specimen trees located mostly west of Springside House, and the forest and wetlands east of Springside House. Pioneer edges occur around the grassland-wildflower meadow and in an undeveloped area north of Springside House and east of Reid Middle School. Previous work surveyed the specimen trees in the ten acres mostly west and southwest of Springside House. The current project is concerned with the 30 acres south and east of Springside House, comprised of the habitats described above.

Pittsfield is located in USDA hardiness zone five, which means that the average annual minimum temperature falls between minus ten and minus twenty degrees FARENHEIT. Hardiness zones are good indicators of how well a plant will grow in a location, but other factors also contribute to a plant's success. Exposure is important, since southerly exposures offer more winter sun than northerly exposures. A plant's genetic makeup and, in the case of landscape plants, its place of origin also play roles in determining cold hardiness. For those interested in "pushing the envelope" testing plants whose northern limits are in zone five, table four lists selected species to test.

The management suggestions detailed herein intend to focus time and funds on developing the Hebert Arboretum. The backbone of the management plan is an interpretive trail that starts at Springside House and leads visitors through the various plant communities and ecosystems. As one travels the path, they will learn about the different ecosystems through signage and a trail guide. Given that Springside Park contains an eclectic collection of habitats, the trail will serve to educate visitors about the various plant communities and how ecosystem processes affect the flora and fauna of an area (on both the macro-and micro-scales). After discussing management options for each plant community, the report will develop the interpretive trail as the final section, tying all the communities together. The management plan is divided into sections that correspond to the geographical divisions noted above; each section of the arboretum will be addressed individually. The final part of the management plan will bring the different arboretum sections together and discuss the merits of managing the arboretum in this fashion. Non-native species can be found in all the natural areas, probably as a result of planting during the period when Springside House was maintained as an estate. The management plan concentrates on designing the arboretum as an educational tool. Attracting visitors from Pittsfield and other parts of Western Massachusetts the Hebert Arboretum has the potential to enlighten many people about the natural world. The aesthetic appeal of trees and shrubs is only one aspect of this education. Additional considerations include the benefits of trees in urban and suburban areas, the diversity of habitats and plant and animal communities that exist, and the ecosystem processes that occur all around us.

Trees previously surveyed (those growing in the landscaped areas around Springside House) are listed in the 1998 Master Plan (Gibbons 1998). Table 1 lists the specimen trees found in the area of the park currently being discussed. The table contains trees, their map number (corresponding to the GIS map of the arboretum), their size and condition, and maintenance needs, if any. Maintenance needs for specimen trees are not considered in the main text, here only general maintenance guidelines are offered. For the specimen trees, qualified arborists must perform much of the work since it involves climbing large trees. Other trees in the forest are not listed individually, but rather mentioned as part of a large plant community. Table 2 lists all tree species found in the 30 acres presently described along with identifying characteristics and comments about each.

Table 6 lists the wildflowers and grasses found in the meadow that marks the first stop on the interpretive trail through the arboretum's natural ecosystems.

Bordering the grassland-wildflower meadow on the south and east is a forest edge. To the south, the edge is only a border of regenerating trees and shrubs, with a few specimen trees interspersed (the large, specimen trees were likely planted as lawn trees when Springside House was managed as an estate. To the east, the forest edge leads into a mature upland hardwood forest. Succession is an important ecosystem process, whereby plants grow and alter their environment (dead leaves, for example, are decomposed and recycled back into the soil). Environmental alteration facilitates the growth of other plants, which supersede the first plants. This process continues until a disturbance drastically alters the environment and the process begins anew. The Massachusetts' landscape provides an excellent example of succession at work.

In Massachusetts, the landscape was primarily forest before European settlement. Native Americans in Massachusetts cleared some land for hunting and farming, but this was primarily on a small scale. As European settlement continued and progressed west, more and more forest was cleared for farmland. Deforestation continued until agriculture reached its pinnacle circa 1840. As colonists moved west, Massachusetts became less and less viable for farming, and farms were abandoned circa 1850. Farmland, with its open fields and previously-tilled soil, became the site of succession in Massachusetts. Open fields provide seed beds for grasses and forbs, which can quickly colonize open areas. Trees such as a white pine (*Pinus strobus*) and gray birch (*Betula populifolia*) also quickly colonize open fields because they produce copious seeds, which can cover large areas. White pine colonized old farm fields and covered much of the Massachusetts landscape by the early 1900's. As the pioneer trees drop their leaves each fall, and as

branches break and fall to the ground, decomposition begins and the leaves and twigs and branches are broken down and recycled back into the soil. As decomposition continues, over time a layer of organic matter (old leaves and twigs in various stages of decomposition) accumulates, increasing the nutrient content of the soil. When the white pine forests of Massachusetts were harvested starting in 1909, they left behind a rich. Organic soil, perfect for colonization by the next successional group, hardwoods. The oaks, maples, birches, and beeches that dominate much of Massachusetts' forests today began growing during this period. The final component of succession is disturbance. In Massachusetts, the major disturbance is wind; the 1938 hurricane is a good example. The hurricane of 1938 toppled many hardwood trees in Massachusetts' forests, allowing succession to start all over. The forest edge around the grassland contains several pioneer species and edge species. Edge species are significant because today building development fragments the forest and creates edges. In ecology, edge refers to the area between two different kinds of habitat; forest and grassland, for example. Edges support a specific community of plants and animals, in Massachusetts, a common edge species is the white-tailed deer. Blue jays, grackles, and catbirds are also edge species. Edges usually indicate forest fragmentation, a frequent consequence of development, in which unbroken tracts of forest are divided into smaller areas. Some species that need unbroken forest tracts cannot survive in the smaller patches of forest that result from fragmentation. The forest edge area should be maintained as such, by periodic cutting of trees, to exhibit this plant community. Since edges sometimes result from disturbance of the landscape, for example after land has been cleared for development, invasive species regularly colonize edges. Many invasive species thrive in disturbed environments, in this case, Oriental bittersweet (*celastrus orbiculatus*) is colonizing areas of the edge.

A second area east of the pool also contains serial pioneer tree species. Previously, the area as a lilac garden and several lilac plants remain. Around the pool and the pond just north of the pool, however, native wetland and successional plants are reclaiming the area. Birches and poplars are growing in the rocky soil, and willows are growing around the pond. This area illustrates that many types of natural areas exist, not just forests. Where wet soils exist, different plants thrive; the dominant hardwoods of the upland forest cannot survive in wet soils, so the less shade tolerant willows use this space. It is important for visitors to understand plant competition and how different growth factors affect the plants in a given area.

Plants need sunlight, water, and nutrients to grow. Some trees tolerate shade, they are very efficient gatherers of light. Mature, dominant trees, the trees that dominate a forest, tolerate shade well. Successional trees, on the other hand, need full sunlight to grow, but they can live on soils with low nutrient content. The trees that colonized abandoned farm fields fall into this category. Other trees tolerate wet soils, growing where waterlogged soils prevent many dominant hardwoods and pioneer species from occurring. The trees around the pond (and in the upper ponds) exemplify this last category. Highlighting the different areas of the arboretum, and plant communities with which they are associates shows visitors the variety of natural habitats that exist in an ecosystem. Unless the remaining lilacs (syringe spp.) can be rejuvenated to good health, they should not become a focal point of this area. Their current condition is generally poor to fair, and they do not qualify as specimen shrubs. As with the previous successional area, the successional trees and shrubs should be cut periodically, preventing succession from taking the next step, and preserving the area at an early stage of succession.

Walking east from the pond, one encounters a series of trails that lead mostly north through deciduous woodlands and wet areas. The deciduous woodlands are typical of a Western Massachusetts forest, containing several typical northern hardwoods and typical understory trees as well. The area represents the stereotypical plant community one associates with a "forest". Within the forest, though, more refined plant communities can be found. The forest is more than a collection of trees. With directions, one can realize the usual assemblages of plants, and how the assemblages can be used to determine environmental factors, like climate and soil. Additionally, there are several specimen trees along the trails, noteworthy for their size, shape, or unusual species. Specimen trees need to be highlighted to help visitors to comprehend their impressive characteristics. This can be accomplished by pruning individual trees to enhance their form and pruning or removing nearby trees to enhance views of the specimen trees. Care should be taken not to remove haphazardly all other plants growing near specimen trees; it is important to understand that plants grow together, in a community, not in isolation. For future use, the management plan must also address trees to replace the specimen trees as they die or break apart in storms. Younger trees that show signs of good health and vigor must be selected to replace the current specimen trees. Trees chosen as replacements should be monitored closely for signs of health problems in order to safeguard them as investments for the arboretum's future.

Continuing north along the main trail, the hiker finds more wet areas, with fewer mature deciduous trees. The plant communities gradually change, reflecting the change in soil condition. Wetland plants comprise a whole community that is underutilized in landscapes. The wetland areas around the upper pond illustrate another unique plant group. There are a few specimen trees in this area worthy of exhibition.

At the northeast corner of the 30 acres currently under consideration, an old road is lined with sugar maples (*Acer saccharum*) and 2 American elms (*Ulmus Americana*). Many of the trees here require hazard reduction pruning, to remove dangerous dead branches and unsafe trees. With proper maintenance, the trees could become a focal part of the arboretum. Refer to Table 1 for a list of the trees, their map position, and maintenance needs.

Two important management considerations apply to all of the areas described above. First, trails must be maintained if the arboretum is to attract and retain visitors who want to learn about trees and plant communities. Many of the trails presently are in poor condition; accessibility is limited to dry times or when there is no snow cover. Additionally, bridge that cross the brook are in poor condition from vandalism. Vandalism must be reduced if the management plan is to be implemented. The interpretive trail requires some type of demarcation to correspond to a trail guide or map; if vandalism continues, the trail will lose its appeal. Recruiting young people to help in the construction and maintenance of the trails might be one way to reduce the occurrence of

vandalism. Trails should be covered with wood chips where possible to reduce soil compaction. In areas of steep terrain, steps might be considered to reduce trip hazards.

The second general consideration is the removal of non-native invasive species from natural areas. Several non-native invasive species exist on the arboretum grounds (table 3). Some were planted as part of the landscape of Springside House and have invaded natural areas of the park. Others have invaded the area just as they have invaded much of Massachusetts, New England, and the eastern United States. Each of these plants has the potential to colonize an area to the exclusion of all other plants. In the 30 acres currently under consideration, most of the plants listed above are not found in large populations in natural areas. Some individuals are growing in natural areas, and some other invasive species are planted as part of the landscaping of Springside House and in the arboretum proper. The invasive species listed above all can reproduce in great quantities, expediting colonization of susceptible areas. It is thus imperative that incipient populations of the invasives be removed as soon as possible.

Figure 1. American elm (*Ulmus Americana*)

Figure 2. Sugar maple (*Acer saccharum*)

The one exception to the above summary regarding invasive plants is purple loosestrife (*Lythrum salicaria*), which is invading the upper wetland areas east of Springside House and south of the road to the playground. Purple loosestrife has been a problem plant in many wetland communities in New England for many years. Highly invasive, purple loosestrife can quickly overrun an area and outcompete other plants.

Figure 3. Purple loosestrife (*Lythrium salicaria*)

In so doing, it degrades the habitat for various birds and animals that require a more diverse plant community to forage and breed. While it presents a pleasant appearance, its negative ecological effects far outweigh any aesthetic consideration. Control options to consider include digging, harvesting and cutting by hand, herbicide application (which requires a license and a permit), and biological control. Currently, the best management option for small areas is spot applications of a suitable herbicide. Mechanical methods and broadcast herbicide applications have not proved as effective. Since research continues on the control of purple loosestrife, it is best to contact the United States Fish and Wildlife Service at (413) 253-8269 to create a management plan for control of this invasive.

For general tree maintenance, Table one offers suggestions on the tree care needs of the specimen trees in the 30 acres currently under consideration. Table five lists management needs for each area on the interpretative trail, referring to table one when appropriate. Tree care can be dangerous work and should be performed by qualified individuals trained in proper use of tools and techniques. The maintenance suggestions are all basic considerations and are relevant primarily to reduce the risk of hazard to visitors. Pruning trees to remove dead branches should be the first priority of the maintenance program. The only exception to this guideline is in the case of specimen trees in need of root enhancement or some other practice to augment tree vigor and health. Pruning to reduce hazards also benefits tree health since dead, dying, and diseased branches will be removed from a hazard reduction pruning. Removing dead and decaying branches unfortunately removes potential nesting and foraging habitat for some birds and animals, but is necessary for human safety. Tree appearance will also benefit from hazard reduction pruning, as unsightly dead branches are removed from the tree's crown.

Other types of tree maintenance include fertilization, insect and disease management, and support systems (cabling and bracing). These types of tree care are valuable services, and can serve an important function in protecting trees in an arboretum (referring specifically to specimen trees at the arboretum). If funds are available to support these services, they would certainly help maintain the trees in the arboretum, but they are not as applicable to the trees in the forested parts of the arboretum. Pruning should be the primary maintenance consideration.

Insect and disease management sometimes requires the application of pesticides, which can only be applied by a certified applicator. Installing structural support systems in a tree usually indicate that the tree is structurally unsound and this increases liability. Because of the legal ramifications of the aforementioned practices, it might not be advisable to encourage these practices, unless a professional is involved.

Finally, to the extent possible, volunteers should perform the maintenance work for the arboretum. Local citizens, school children, and a boy and girl scouts are all excellent labor pools. Local schools could offer academic credit for performing trail maintenance, scouts could receive merits for pulling invasive trees and shrubs from the forest, and local citizens could serve to direct management activities (as currently occurs with the Hebert Arboretum board of directors). Involving community members further educates volunteers (and those who direct maintenance activities) and lends a sense of community and accomplishments to those who participate. Volunteers will feel a deeper attachment to the arboretum and will be more likely to support it financially and otherwise.

Concerning management for future arboretum acquisitions, one area that could serve an interesting ecological and educational purpose is the large, abandoned orchard and fields north of the playground (see map). The management guidelines up to this point have suggested maintaining the plant communities as they are to illustrate ecological points. The old orchard can be left alone to undergo succession as naturally happens (with the caveat that invasive species will be removed from the area). Pictures of the orchard and of the landscape before the orchard existed, if available, should be gathered. If photographs are not available, perhaps drawings or paintings exist; if not, residents who remember the landscape from many years ago might be able to describe the view to an artist, who can recreate the image.

Annual or quarterly photographs and drawings of the landscape can help document the area's changes as the community matures with time. Seasonal changes will help visitors appreciate plants with year-round interest, ones that are not just pretty when



flowering. Annual changes will document new plants growing and old ones dying and not being replaced by kin. In addition to visual documentation, interested volunteers can sample the landscape annually to track and record the changes in the land. A running tally will serve not only to educate visitors and persons recording the changes, but it will serve an historical purpose, connecting generations of visitors and residents who monitor the land. This is an excellent way to inspire people to recognize their connection to the land, to each other, and to future and past generations.

The management plan outlined above will require an initial investment of time and money and annual contributions for maintenance. With the proper time and effort, the Hebert Arboretum can become a locus for environmental education in Massachusetts. Dedicated volunteers have already helped it become a wonderful spot to visit, continued dedication and support are needed to make the Hebert Arboretum succeed.

### Interpretative Trail Guide

Highlighting the newly acquired 30 acres of the Vincent J. Hebert Arboretum, an interpretative nature trail guides visitors through the acreage, pointing out ecosystems and ecological ideas along the way. While the 10 acres of the arboretum immediately around Springside House is designed to show off individual specimen trees of interesting varieties, the 30 acres presently under consideration will be maintained as an ecosystem montage that visitors can use to learn about other habitats than the common forest ecosystem. Conservationists suggest that one way to alert people to the need for environmental protection is through education. Too often, lay people associate “nature” with forests, not recognizing that other natural ecosystems are just as critical in reference to habitat preservation. The variety of habitats in the Hebert Arboretum provides an opportunity for visitors to learn about the many different kinds of “nature” crucial to biodiversity.

Along the trail, typical plant communities, representative of a particular ecosystem, will be pointed out and described with signage. In addition, specimen or unique trees will be spotlighted, helping visitors to appreciate native trees. This is important since many landscape designers are encouraging the use of native plants in garden and landscape design. Frequently, people do not appreciate the landscape potential of native trees and shrubs. Through the interpretative trail, the Hebert Arboretum can offer an exceptional learning device for all visitors. At the end of each paragraph below is a trail marker paragraph that can be printed on the trail map to correspond to the trail marker at each site. In addition to the trail markers for different plant communities, the following discussion contains pertinent information to use for highlighting certain specimen trees. Table 1 lists specimen trees and table 2 lists all the trees found in the area under review. One additional idea for the arboretum is to construct an informational guide about the different trees and shrubs that grow in the arboretum.

Starting at Springside House, where visitors will be able to pick up maps of the arboretum, one has the choice of three different destinations. The first option is to walk around the grounds west of the arboretum, where most of the specimen trees are located. From here, one can walk east around Springside House to the gardens just south of the greenhouse. L and annual flowers here, as well as specimen trees, captained by the mature two-leaf black oak (*Quercus velutina*). After strolling through the two previous areas, one can follow signs to the start of the interpretative trail, just south and east of the Norway spruce (*Picea abies*) grove. A trail that leads south through the grassy meadow currently exists; wood chips should be added to define the trail more clearly. Marking the path with wood chips will also direct visitors to stay on the path.

A trail marker in the grassy meadow will describe the decline in grassland habitat throughout the United States as native tall and short-grass prairies are converted to farmland. Specifically relating to grasslands in the Northeast, the marker should discuss the decline in grassland as former farmland was abandoned and is slowly reverting back to forest. Questions to ask ourselves include: Should we change ecosystems to create diversity (for example, cutting forest to create a grassland where one previously did not exist)? On what do we base our understanding of what is “natural” in an area (our time frame ultimately what dictates what habitat existed in a given area)? The trail marker should also highlight native grasses to use in a landscape and list the drawbacks of maintaining unnatural turf grass lawns. Turf grass requires excessive irrigation, fertilization, disease and insect control, and mowing. All of these activities degrade the environment in various ways and a native wildflower meadow is far less maintenance intensive. Table 6 lists the wildflowers present in the grassy meadow.

### #1 Trail Marker:

Native grasslands are vanishing quickly from the landscape. In the Midwest, native prairies are converted to farmland, reducing biodiversity and degrading habitat for birds and wildlife. Grassland communities occur in places where insufficient rainfall prevents trees and other woody plants from surviving. Grasslands also occur in landscapes where natural disturbance like fire or flooding does not allow woody plants to establish themselves. Native wildflower meadows offer an attractive and low-maintenance alternative to turf grass lawns. Some of the wildflowers in this meadow are rare, including, hemlock-parsley (*Conioselinum chinense*), dittany (*Cunila origanoides*), and black cohosh (*Cimicifuga racemosa*).

From the first trail marker, the trail heads south to the brushy edge of the grassy meadow, north of the lower pond and pool. A second trail marker will highlight this area as one of pioneer regeneration that occurs if natural disturbance does not return a grassland to grasses periodically. Where rainfall is below a certain amount (in the vicinity of 20 inches per year), trees cannot survive, and grasses dominate, as noted above. The Great Plains epitomizes this plant community. In other situations, disturbance prevents trees from succeeding grasslands. For example, fire is a natural disturbance that prevents trees from establishing in some areas where grasses have adapted to the fire disturbance. Flooding can accomplish the same effect, where grasses are adapted to reseed a disturbed area quickly, before trees can establish themselves and shade the grasses out. Along the edge of the grassy area,

however, where no mowing occurs, trees have begun to regenerate (there are also some planed trees from the property's prior history).

A large, specimen American Basswood (*Tilia Americana*) dominates the regeneration plants along the grassy meadow edge. Several smaller basswoods in the vicinity show how a large tree produces offspring nearby. Providing light, soft wood, basswood is rarely used for structural timber. The same qualities that restrict its use as a beam, however, make it a favorite of wood carvers, who appreciate the ease with which basswood can be worked. Basswood is a dominant tree (which means it tolerates shade and can grow enough to become, eventually, a dominant tree in the forest) that commonly grows on rich soils and bottomlands. Given its size and the sizes of the surrounding trees, the basswood was likely planted as part of the landscaping of Springside House. As succession continues, we recognize the volunteer trees and shrubs that fill in formerly open areas. Volunteer plants are opportunistic, growing wherever enough light reaches the ground. Typical volunteer plants growing in this edge, as they would on an abandoned farmland anywhere in New England include black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), staghorn sumac (*Rhus typhina*) and common buckthorn (*Rhamnus cathartica*). When maintenance is not continued, a landscape, just like any other area, will start to revert to a more natural state. In this case, lack of maintenance at Springside Park has allowed succession to begin to reclaim the previously landscaped area where the linden was planted.

Figure 4. Basswood (*Tilia Americana*)

Figure 5. Honeysuckle (*Lonicera tartarica*)

Two other noteworthy plants in this regeneration community include Tartarian honeysuckle (*Lonicera tartarica*) and Oriental bittersweet (*Celastrus orbiculatus*). Both of these plants are highly invasive and can rapidly colonize an open area, excluding other species and reducing biodiversity. Invasive plants succeed for many different reasons, they grow fast, some can reproduce from cuttings of the plant without flowering, some can thrive in poor soil conditions. Removing invasive species from the arboretum should be a high priority, as noted in the management section.

## #2) Trail marker:

The process of succession occurs in nature when natural systems are left alone (i.e., not maintained directly by humans). The large tree is European linden (*Tilia cordata*) most likely planted as part of the landscaping at Springside House. Once maintenance is reduced, volunteer plants begin to creep into the landscape. Here, black locus (*Robinia pseudoacacia*) and black cherry (*Prunus serotina*) have begun to reclaim the area around the linden. We also notice, however, that the linden has propagated itself by spreading seeds which have grown into younger trees competing with the locust and cherry—which one(s) will survive?

The trail leads south from the regeneration edge and linden along a similar edge or regeneration plants to the west of the pool and lower pond. Close to Springside Avenue, in an overgrown area, a beautiful specimen of Austrian pine (*Pinus nigra*) is hidden by a mature basswood and successional trees, shrubs, and vines. This area once again illustrates nature's ability to reclaim an area previously used for a different purpose, whether farming or landscaping. Austrian pine is another non-native tree planted as a landscape tree earlier in the 20<sup>th</sup> Century. Austrian pine is urban hardy, it is only of only a few coniferous trees that can tolerate levels of air pollution encountered in some urban environments. Overgrown trees, shrubs, and vines should be cleared away from this pine to highlight its symmetrical branching habit (branches from in whorls around the stem, each year a new whorl of growth is added to the stem and one can count the number of whorls and approximate the tree's age) and attractive bark. The tree itself also requires hazard reduction pruning to remove dead branches.

Figure 6. Oriental bittersweet (*Celastrus orbiculatus*)

## #3) Trail marker:

During the 20<sup>th</sup> Century, urban foresters and landscape architects sought tree species that could tolerate urban adversity (in form of soil compaction, air pollution, road salts, and animal urine). Many trees and shrubs from Europe and the Orient were brought to America to use in landscapes and as street trees. Sometimes the trees grew well and succeeded in their new home; other times, however, imported trees became invasive, escaped from the landscape, and out-competed native plants in the forest. Some imported trees brought imported pests that ravaged native trees with had no defense mechanisms against the imported pests (Chestnut blight, for example.) We need to evaluate more carefully the potential impacts of importing new trees and shrubs for use in America; we should look to native plants to see if they can be used instead of non-natives if the situation allows.

Figure 7. Austrian pine (*Pinus nigra*)

Immediately east of the Austrian pine, scattered throughout the playground are mature black cherry (*Prunus serotina*) trees and a middle-aged, multi-stemmed black willow (*Salix nigra*). Table 1 lists the trees and pertinent information; they are also located by number on the map. Black cherry is a common tree in New England and the Middle Atlantic states, it frequently colonizes open sites (as we saw at marker two) and can live to become a mature, dominant tree. When harvested for timber, black cherry is used for veneer and furniture because of its color and grain. Some of the trees in this grove require maintenance to reduce the risk of hazard, primarily, trees should be dead wooded to reduce the chance of branch failure. Specific guidelines for each tree can be found in table 1. Notice, too, that these trees which have grown without competition from other nearby trees have a different shape than trees grown in the forest, with extreme competition from immediately adjacent trees. Given relatively unrestricted growing conditions in the form of adequate light, water, and soil nutrients, trees will expand their branch structure to maximize their light-gathering

ability. The only restriction on their size and shape under these circumstances is gravity, which continuously tries to pull the tree back to earth. In the forest, with many other trees nearby, competition for light compels trees to grow straight and tall and then grow a wider crown to gather light. Compare the shape of open-grown trees in the arboretum with trees grown in the forested areas throughout the arboretum (keep in mind that some trees might have been planted as open-grown trees but are now in the midst of natural succession).

#### #4) Trail marker:

Forest competition forces trees to grow straight and tall, before they build a wider crown to gather light for photosynthesis. The shapes of these mature Black cherry (*Prunus serotina*) trees indicates that competition for light is not great and they have been able to grow wider to gather more light. Factors that limit tree growth include light, water, soil nutrients, and gravity. Nearby, the black willow (*Salix nigra*) has produced several main stems, also since competition for light is minimal. As you follow the trail, notice the different tree shapes, some are genetically programmed, but the competition for light ultimately dictates the tree shape. Notice how some trees in the wooded areas have wide, spreading canopies; these trees were likely once open-grown trees that did not have competition from other trees.

Before leaving the playground area, a small side tour to the border of the arboretum along Springside Avenue illustrates an interesting tree, Crimson King Norway maple (*Acer platanoides* var. 'Crimson King'). Once hailed as the ultimate street tree, Norway maple has since fallen out of favor with many urban foresters and ecologists. Norway maple exhibits excellent pollution and soil compaction tolerance, road salt does not adversely affect it either. However, after many communities planted thousands of Norway maples as street trees, flaws began to surface. Stressed trees are susceptible to verticillium wilt, a soil born fungus that disrupts the vascular system of a plant. Furthermore, Norway maples seem prone to sudden branch failure, where apparently healthy branches suddenly break without any undue wind stress. Ecologists condemn Norway maple because of its invasive tendency, it outcompetes native maple trees in the forest, creating monocultural stands and reducing biodiversity. In fact, there are some Norway maples invading the wooded areas of Springside Park, and they should be removed. Presently, many communities are removing old, dying Norway maples that were planted earlier in the 20<sup>th</sup> Century. The group of Norway maples lining Springside Avenue illustrates the complexity of planting trees out of their natural environment.

#### #5) Trail marker:

There are very few “perfect” trees to use in a landscape or street tree setting. Sometimes, “deal” trees are found to be less than ideal only after 20 or 30 years. Because of the risk involved with losing an entire community of trees, urban foresters suggest not planting more than 10 percent of a community with a given species. We now appreciate better how devastating community-wide tree loss can be. Dutch elm disease wiped out most of the American elms (*Ulmus Americana*) in the United States, some communities lost almost all their street trees as a result.

Walking east from the playground area, we approach the lower pond and pool, bordered on the east by a wetland plant community. Typical of wetland trees, a large black willow (*Salix nigra*), grows along the eastern shore of the pond.

#### Figure 8. Black willow (*Salix nigra*)

Willows prefer wet sites, thriving where many trees would not survive. A popular misconception is that plants only use carbon dioxide, and expel oxygen as a byproduct of photosynthesis. While plants do “inhale” carbon dioxide and “exhale” oxygen during photosynthesis, plant roots need to “inhale” oxygen and they “exhale” oxygen, just like animals. When soils are waterlogged, oxygen is forced out of the soil and tree roots drown, just like we would. Some trees are better at “holding their breath” when soils are wet. The plants around the lower pond and in the upper pond reflect their adaptation to wet conditions. Many wetland trees grow quickly since water and light are abundant; willows and cottonwoods (found near the upper pond) can grow over six feet in a single year. Also, around the shoreline occur alders (*Alnus* sp.) that are another common plant in wetland areas.

The black willow, unfortunately, is not a healthy tree, and has several large dead branches. Like many other of the large, mature trees on the property, the willow needs safety pruning if visitors will be encouraged to view the trees up close. As mentioned in the management section, the arboretum can educate visitors not only about trees, but also about proper tree care. Maintaining the arboretum's trees properly will show visitors how trees should look when they have received proper pruning.

#### #6) Trail marker:

Certain plants thrive in wetlands because they have evolved to tolerate the waterlogged soils. Unlike tree leaves, that “inhale” carbon dioxide and “exhale” oxygen, tree roots need to “inhale” oxygen and “exhale” carbon dioxide. Like animals. When too much water is in the soil, it pushes the oxygen out and make it difficult for the tree roots to breathe. In your yard, you might have soils that are “wetter” than normal; in this case, planting trees like black willow (*Salix nigra*) is the smart choice since the tree is matched to the environment.

East of the pond, an old lilac (*Syringa* sp.) is being overgrown (succession is occurring) by pioneer species. This is similar to what was happening at trail marker two, where the lack of mowing allowed black locust, black cherry, and staghorn sumac (and some invasive species listed earlier) to reclaim the area. Here, black cherry is regenerating, accompanied by gray birch (*Betula populifolia*), white poplar (*Populus alba*), and bigtooth aspen (*Populus grandidentata*). Under management, the lilac garden most

likely presented an attractive grove. Without regular maintenance, however, it has fallen into a state of disrepair and fast-growing, prolific pioneer species are re-taking the area.

Pioneer plants require full sunshine to grow. With adequate sunshine, they are well adapted to grow quickly and spread seeds over a large area. Pioneer plants are notoriously prolific, but their reproductive success comes at the price of being short-lived. In nature, organisms fall into one of two survival strategies; grow quickly and produce lots of offspring or grow slowly and put more energy into self-preservation (overtime, many offspring are produced since the organism survives for a long time). Pioneer plants, obviously, fall into the former category; dominant trees fall into the latter as will be discussed below.

#### #7) Trail marker:

Pioneer plants are the first to colonize an area left unmanaged or recently disturbed. When farmers in Massachusetts abandoned their farms beginning in the middle of the 19<sup>th</sup> Century, old farm fields were gradually returned to forest through succession (described above). Farm fields, because they were open and in full sun were ideal for seeding by pioneer species. Pioneer plants require full sunshine to grow; with adequate sunshine, they are well adapted to grow quickly and spread seeds over a large area. Pioneer plants are notoriously prolific, but their reproductive success comes at the price of being short-lived. In nature, organisms fall into one of two survival strategies: grow quickly and produce lots of offspring or grow slowly and put more energy into self-preservation (over time, many offspring are produced since the organism survives for a long time). Pioneer plants, obviously, fall into the former category.

From the former lilac garden, the trail heads north into the forest proper. In the vicinity of Indian Rock, we come to the next trail marker, illustrating the upland deciduous forest. Two key species are common in this area and they illustrate the difference between dominant and understory trees. The common dominant tree in this section of the forest is yellow birch (*Betula alleghaniensis*), the common understory tree is hophornbeam (*Ostrya virginiana*), and each is native to New England. Dominant trees are shade tolerant and grow quite tall; understory trees are also shade tolerant, but do not grow so tall, even in full sunlight. Dominant trees grow slowly when they are young, waiting for an opening in the existing canopy to provide enough light for them to grow taller. When an old tree dies, the forest canopy opens up and lets light through below the tree tops. A young dominant tree can then grow tall enough to fill the open spot in the canopy.

Since dominant trees intercept much of the sunlight in the forest before it reaches the forest floor, the light that does penetrate is scattered. Understory trees prefer the diffuse light below the forest canopy. Whereas dominant trees tend to grow straight and tall, with a relatively narrow crown, understory trees prefer to grow wide open crowns to gather as much light as possible. Understory trees do not grow tall enough to compete with dominant trees, so they have adapted in other ways to survive in their environment. The mix of different canopy levels, from dominant to understory down to ground covers offers a range of habitats to wildlife. Observing wildlife in the forest, one sees how certain species of animals or birds use only certain areas.

#### #8) Trail marker:

The forest is composed of various layers of vegetation, each offering habitat for different birds and animals. Dominant trees grow tallest and form a canopy through which only scattered light penetrates. Tolerating shade, the dominant trees grow slowly until a canopy opening allows them to reach higher and grow faster. They grow straight to the light, competing with other dominant trees to reach the opening in the canopy. Below the canopy, the understory is composed of trees that survive in partial shade condition. Understory trees have evolved to grow a wide crown of branches that efficiently gathers the diffuse light penetrating the forest canopy.

Following the trail north from Indian Rock, we cross a bridge over the stream and immediately face some of the largest trees in the arboretum. Among three large red oaks (*Quercus rubra*) and three large sugar maples (*Acer saccharum*), one of the most majestic trees in the arboretum stands along a slope of mature deciduous trees. With a diameter of breast height (dbh) of over four and a half feet, this red oak stands out from the surrounding trees. Looking around, however, we notice that several trees of much smaller dbh's are equally as tall as the big red oak. As noticed earlier with the black cherry trees in the playground trees will maximize crown area when light competition is minimal. The large red oak grew for many years without significant light competition and was able to make its crown wider. The younger oaks that have grown up in its shadow, however, have spent their energy growing tall and straight, to reach the sunlight. When comparing the proportion of the canopy of the old and young red oaks one sees how the old tree has a much larger crown while the young trees have smaller crowns but are equally as tall as the old tree.

Red oak and sugar maple are stereotypical New England forest trees and both are clearly dominant trees in the forest. Usually, sugar maples prefer deeper, moister soils, found on north and east facing exposures. Here, they grow with American beech (*Fagus grandifolia*). Red oak is more often found on drier exposures on south and west facing slopes with hickories (*Carya sp.*). Moisture is an important limiting factor in tree growth and survival. As noted earlier, trees need more water than grasses and shrubs to grow. One of the reasons trees in the Pacific Northwest grow so large is because of the high amount of water they receive through precipitation and mists. Contrarily, the Great Plains is predominantly grassland because rainfall is insufficient to support most tree species. Under unlimited growing conditions (ample light, water, and soil nutrients), the most competitive trees will grow (in the unlikely absence of disturbance). Sugar maple and American beech are excellent competitors and, under ideal conditions would dominate the most fertile sites in a landscape. Since ideal conditions rarely occur, variation is common; but other trees have evolved to grow in places or under conditions the best competitors cannot grow. We can see how red oak and hickory are better



suited for drier conditions and they dominate such landscapes, even though maples and beech out compete them where more fertile conditions exist.

#### #9 Trail marker:

Large trees frequently catch our attention. The impressive red oak (*Quercus rubra*) that is being outgrown by its younger, more vigorous offspring, has survived for a long time because it is a strong competitor (and might be a little lucky). Its nearby neighbors, the large sugar maples (*Acer saccharum*) have also endured adversity in the form of hurricanes, snow and ice storms, and droughts. Old trees like these have long histories. Perhaps first growing as many as 150 or 200 years ago. It's interesting to consider the different events these trees might have witnessed.

Back-tracking over the bridge and then continuing north along the trail, we come to the next trail marker among the white ash (*Fraxinus Americana*) trees. White ash is another dominant tree, growing quickly skyward where light permits. With its straight grain and light, strong wood, white ash has a variety of uses. It is best known as the wood out of which baseball bats and hockey sticks are made. Unfortunately, ash decline, a poorly understood disease complex, is killing the white ash trees in the forest and landscape.

Insects and diseases have the potential to severely decrease tree populations. Many times, imported pests and pathogens cause catastrophic loss of trees, as Dutch elm disease and chestnut blight have shown. Gypsy moths and hemlock woolly adelgid are imported insect pests that have ravaged native oaks (*Quercus sp.*) and hemlocks (*Tsuga sp.*), respectively. The tree landscape can change dramatically as the result of insect and disease damage, consequently causing a change in animal and bird communities that use the trees. It is sobering to picture a landscape without white ash, but sometimes this occurs.

#### #10 Trail Marker:

Insects and diseases have the potential to decrease tree populations severely. Many times, imported pests and pathogens cause catastrophic loss of trees, as Dutch elm disease and chestnut blight have shown. Gypsy moths and hemlock woolly adelgid are imported insect pests that have ravaged native oaks (*Quercus sp.*) and hemlocks (*Tsuga sp.*), respectively. The tree landscape can change dramatically as the result of insect and disease damage, consequently causing a change in animal and bird communities that use the trees. Presently a disease complex known as ash decline is killing native white ash trees. It is sobering to picture a landscape without white ash, but sometimes this occurs.

Along the east side of the trail, just north of the previous trail marker, a middle-aged American beech (*Fagus grandifolia*) is beginning to claim dominance. Beeches are one of the most shade-tolerant trees in the eastern forest, they grow slowly, waiting for a canopy opening; once established, they grow suckers from their roots and form a nearly pure stand. While not a very large tree, this beech, if it withstands wind, snow, ice and pests will grow to enormous proportions. We observe the proliferation of young beeches surrounding the "mother tree", these young trees are growing from the roots of the large tree so that the entire grove is one large, connected organism. One of the most attractive qualities of American beech is its smooth, gray bark. Some authors describe it as resembling elephant's skin.

Other trees that produce root suckers and form groves of interconnected trees are also found at the arboretum, including sassafras (*Sassafras albidum*) and staghorn sumac. With these species, one can clearly see a mounding effect as the original tree (also the tallest) produces root suckers whose age and height decline farther from the trunk of the parent tree.

Figure 9. Root suckers propagating offspring shrubs

#### #11 Trail Marker:

Trees, like any other organism, need to reproduce. The common reproduction method entails flower production, pollination, and fruit production. Fruits like apples and peaches, or acorns, or nuts like walnuts and pecans are all means by which trees move their seeds. There are other types of seeds that the wind transports, like the samaras of maples or the keys of ashes and elms. Some trees also produce vegetative growths to reproduce, like root suckers that form new trees from an existing tree's root. The mature American beech (*Fagus grandifolia*) here had produced, through root suckering, all the smaller trees under its canopy. When the mature tree dies or is blown over, the young trees can replace it, perpetuating the species.

Continuing north on the trail, we pass through more deciduous woods until reaching a boggy area west of the trail. Here, a group of eastern larches (*Larix laricina*) and black willows flourishes in the wet soil where other plants do not grow.

Figure 10. Black willow (left) and Eastern larch (*Larix laricina*)

Normally, larches are not found in temperate forest, preferring the colder northern bogs where most plants do not grow. In fact, eastern larch grows farther north than any other North American tree. This is once again an illustration of how species adapt to growing conditions in order to survive, and larches, since they cannot compete with beech and maple, have evolved to survive in conditions unfavorable to other trees.

Larch is also curious in that it is one of only a few coniferous trees that is deciduous (loses its leaves in the fall). Almost all the North American conifers (pines, spruces, firs, hemlocks) are evergreen, larch and baldcypress (*Taxodium distichum*) are the only

naïve conifers that lose all their needles annually. It is a common misunderstanding that conifers never lose their needles; in fact, they do lose their needles, only the process takes place over several years.

#### #12 Trail Marker:

Two species normally not found together make up this interesting little wetland, black willow and eastern larch (*Larix laricina*). We saw black willow earlier on the trail, by the lower pond. Eastern larch also survives in wet soils, but is normally found farther north, in boreal bogs and at high elevations where other trees cannot grow. The larch's delicate appearance belies its rugged toughness and ability to tolerate long winters and poor soils. Eastern larch is one of two native coniferous trees (among pines, spruces, firs, and hemlocks) that is also deciduous. Each fall, the larch drops its needles with neighboring oaks, maples, and beeches; the following spring, a new set emerges. This contrasts with other conifers, which lose needles gradually, over the course of a few years, not all at once.

Just north of the grove of larches, on the west side of the trail, we find several specimen sugar maples growing on the periphery of the boggy area. One of these maples is noteworthy because of a disease, called a target canker. At the base of the tree, one can see that the bark has been killed, exposing the wood below as the tree produces new wood (called callus) to close over the wound, a fungus kills the callus before it can close the wound. After successive years of the tree and the fungus battling to close or keep open the wound, a series of ridges forms, appearing like a bulls-eye target, hence the name, "Target canker".

Cankers are localized dead areas of bark and are caused by different organisms, including humans. Because they create an open area of dead wood on the trunk, cankers allow decay to weaken the wood and precipitate failure of tree trunks during storms. Certain trees are notoriously susceptible to cankers, and although sugar maple is not one of them, they can be affected sometimes.

#### #13 Trail Marker:

One of the sugar maples (*Acer saccharum*) here has a "canker" at its base. A canker is any localized area of dead bark and allows fungi and other organisms to enter the tree and decay the wood. As a result, the tree becomes weaker since the decayed wood is not as strong as sound wood. Trees with structural defects can fail prematurely during storms, their trunks, branches, or roots being unable to stand the stress from wind, snow, or ice.

West of the sugar maples, the wetlands are evidenced by black willows and various poplar species. In the case of the willows, however, the wet soil is finally catching up with the trees and they are dying back. Even trees that prefer waterlogged soils have limitations, and this is a good example.

Heading north again on the trail, we leave the forest and reach an open, previously-landscaped area. Lining an old road by the baseball field are mature sugar maples, some of which badly need maintenance. The trees range in size from 1.75 to 3 feet dbh and some are in good health. Sugar maples are not as suitable as street trees compared to other maples because they are sensitive to the air pollution and road salt inherent in many urban and suburban areas. Table 1 presents a list of these trees and their management needs. One difficulty from a management standpoint of urban and suburban trees is balancing the need for public safety with the need to leave nature free from human interference. One of the aforementioned sugar maples is dead, and its wood is decaying. In the forest, the tree would gradually shed mass until no part of it remained standing, all the wood would be on the ground, slowly decomposing and recycling nutrients back into the soil. On its way to this ending, it would attract insects and fungi that participate in decomposing the wood. Birds and mammals, in turn, would feed on the insects and possibly build homes in the soft, easily-excavated wood. Reptiles and amphibians might find a place to nest in the decomposing wood on the ground. One can see how organisms and processes are closely intertwined in nature. In a landscape of street setting, however, trees like this cannot be left to fall apart on their own since in so doing they might damage a car or injure a person. Where trees do not pose an immediate threat to persons or property, it is often better to leave them to nature since they serve so many useful purposes.

Nearby the sugar maple-lined road are two specimen American elms, once the preeminent street tree in the United States. Ravaged by an imported fungus, American elms grace the streets of very few communities anymore. Ideally suited for the urban environment, American elm has a vase shape, which allows pedestrian and vehicular traffic. Adapted to the floodplain, American elm tolerates soil compaction and urban heat better than most trees and it was not prone to stem or branch breakage. Currently, researchers are developing varieties of elm that resist Dutch elm disease fungus that killed so many American elms.

#### #14 Trail Marker:

Dead and structurally weak trees in a landscape or on a street can be dangerous because they have targets (people, houses, cars) that can be damaged if the trees fall. Such trees (or dangerous parts like dead branches) are often removed to reduce the risk of personal injury and property damage. In the forest, the same trees do not have similar targets and can remain standing, left to fall down on their own. In this way, the decaying trees provide habitat for nesting and foraging for many birds and animals. As the tree continues to decay, its wood is recycled back into the ground, where new trees can reuse the nutrients to build their trunks and branches. Nothing is wasted in nature.

Walking west from the sugar maples, we approach the upper pond wetland area. Signaling the presence of wet soils, a large eastern cottonwood (*Populus deltoids*) is perched on the periphery of the pond. Like the black willows seen earlier, eastern cottonwood is found almost exclusively around the waterlogged soils near ponds and swamps. Cottonwoods can grow very quickly and reach giant sizes in relatively little time (more than 80 feet in 50 years). As noted earlier, though, their tradeoff for such meteoric growth

is weak wood and a short lifespan. Among the other *Populus* species in the arboretum are white poplar (*Populus alba*) and big tooth aspen, both are found around the upper pond.

In the wetland area itself, large black willow occurs, found throughout the wetland are common alder, pussy willow (*Salix discolor*), marsh cattail (*Typha glauca*). These plants are actually taking over the pond, creating more of a marsh that has little open water. As the plants drop their leaves and fruit each year, more and more organic matter is added to the pond, filling it up. Eventually, the pond dries up completely, and new plants succeed the area where they were previously unable to grow because of the water. This is succession in a different area, but it is the same process witnessed earlier where trees were growing in because certain areas were no longer being mowed. The pond will continue to fill up unless some type of disturbance (human or natural) occurs. A flood could wash away much of the organic matter and even some trees and shrubs; then, the process would start all over again.

#### #15 Trail Marker:

The pond here is undergoing succession just like we saw earlier where regeneration was occurring on the margins of the meadow and where the lilac grove was no longer maintained. The plants best adapted for growing in this wet environment are common alder (*Alnus serrulata*), pussy willow (*Salix discolor*), and marsh cattail (*Typha glauca*). The larger trees in the background are black willow (*Salix nigra*) and cottonwood (*Populus deltoids*).

#### Suggested Reading:

##### Soils:

Brady, N.C. The Nature and Properties of Soils. 1990. MacMillan. New York, NY.

##### Tree and Shrub Identification:

Little, E.L. The Audubon Society Field Guide to North American Trees: Eastern Region. 1980. Knopf, New York, NY.

Petrides, G.A. Peterson Field Guides: Eastern Trees. 1988. Houghton Mifflin, New York, NY.

Symonds, G.W.D. The Shrub Identification Book. 1963. Morrow, New York. NY.

##### Tree Maintenance:

Pirone, P.P. Tree Maintenance. 1988. Oxford, New York. NY.

##### Mapping:

Avery, T.E. and G.L. Berlin. Fundamentals of Remote Sensing and Airphoto Interpretation. 1992. MacMillan. New York. N.Y.

Table 2.

Genus species	Common name	Characteristics	Habitat	Comments
<i>Acer negundo</i>	boxelder	usually multi-stemmed; compound, opposite leaves	opportunistic, tolerates adversity	weak wood
<i>Acer rubrum</i>	red maple	deep red fall foliage; red buds; red leafstalks	moist, well-drained soils and frequently in swamps	fast growth; useful as a street tree
<i>Acer saccharinum</i>	silver maple	gray, flaky bark, vase shaped canopy	swampy, wet sites	fast growth; weak wood
<i>Acer saccharum</i>	sugar maple	peeling, gray bark; large, straight trunk, lobed leaves	climax forest; rich, moist, well-drained soils	low pollution tolerance
<i>Alnus serrulata</i>	common alder	small "cones", multi-stemmed	wet areas	northern species
<i>Betula alleghaniensis</i>	yellow birch	bronze-yellowish, peeling bark, straight trunk; sometimes 2-stemmed	climax forest; rich, moist, well-drained soils; lowland and upland sites	good timber species
<i>Betula papyrifera</i>	paper birch	white, peeling bark	northern hardwoods; upland; moist, well-drained sites (n.&e. facing slopes)	used by Native Americans for canoes
<i>Betula populifolia</i>	gray birch	many small, lateral branches; black trunk chevrons	disturbed sites; pioneer species; shade intolerant	short-lived
<i>Carya cordiformis</i>	bitternut hickory	yellow, scurfy buds	drier slopes	strong wood
<i>Cornus sericea</i>	redosier dogwood	deep, red twigs	wet areas	used for roadside plantings
<i>Crataegus sp.</i>	hawthorn	large thorns	upland moist slopes	often planted as an ornamental
<i>Fagus grandifolia</i>	American beech	smooth, gray bark	upland moist, well-drained sites; n.&e. facing slopes	extremely shade tolerant
<i>Fraxinus americana</i>	white ash	opposite, pinnate leaves; light gray bark	upland, dry sites; also on well-drained sites	wood used for baseball bats, hockey sticks
<i>Hamamelis virginiana</i>	common witchhazel	flowers in fall, after leaf drop	low, rich soil; banks of rocky streams	common understory plant
<i>Juglans cinerea</i>	butternut	large nuts similar to walnuts	open sites, sunlight	nuts are eaten by wildlife
<i>Larix laricina</i>	eastern larch	deciduous conifer; open crown	northern bogs and cold sites	northernmost tree in North America
<i>Malus spp.</i>	crabapple	fruit spurs on shoots	orchards, landscapes	
<i>Ostrya virginiana</i>	hophornbeam	tan, flaky bark	moist to dry upland slopes; flood intolerant, shade tolerant	wood is very hard and strong
<i>Picea abies</i>	Norway spruce	short, sharp needles	landscape tree	non-native (Europe)
<i>Picea glauca</i>	white spruce	short, sharp needles	northern boreal forests	typical Christmas tree shape

<i>Pinus nigra</i>	Austrian pine	thick, furrowed bark; needles in 2, long and stiff	soil adaptable, flood intolerant	non-native (Europe)
<i>Pinus resinosa</i>	red pine	reddish bark; straight trunk	upland dry and moist sites; soil adaptable	high wildlife value
<i>Pinus strobus</i>	white pine	5-needled pine, long, soft needles	pioneer species, typical of abandoned farm fields	used for ship masts in the Colonial era
<i>Pinus sylvestris</i>	Scots pine	needles in 2, orange bark		
<i>Populus alba</i>	white poplar	white bark; white leaf undersides	soil adaptable; shade intolerant	non-native (Europe)
<i>Populus deltoides</i>	eastern cottonwood	triangular, toothed leaves; large	stream banks, wet sites	fast growth; prairie tree
<i>Populus tremuloides</i>	quaking aspen	flat petiole--leaves easily rustle; light bark	upland, dry sites; no flood tolerance; pioneer; cold tolerant	northern species
<i>Prunus serotina</i>	black cherry	scaly, dark gray bark; cherry fruit	upland, dry sites; no flood tolerance; pioneer	wildlife value
<i>Quercus alba</i>	white oak	large; typical, round-toothed oak leaf; bark is light tan	dry upland sites; s.&w. facing slopes;	harvested extensively for timber in Colonial era
<i>Quercus rubra</i>	red oak	large; typical, bristle-toothed oak leaf; bark is gray	dry upland sites; s.&w. facing slopes;	doesn't need as much water as maples, beech
<i>Rhamnus cathartica</i>	European buckthorn	prolific dark berries in late summer	understory, disturbed sites and edges	not invasive like its European cousin
<i>Robinia pseudoacacia</i>	black locust	thorny twigs; silhouette is coarse	dry upland sites; disturbed sites; successional species	shade and flood intolerant
<i>Rhus typhina</i>	staghorn sumac	large, deep red flowers very obvious in summer	pioneer species, typical of abandoned farm fields	root suckers create a grove of trees
<i>Salix discolor</i>	pussy willow	multi-stemmed shrub; gray flowers in early spring	wet areas	soft, light wood breaks easily
<i>Salix nigra</i>	black willow	dark, ridged bark; yellowish twigs	wet areas	soft, light wood breaks easily
<i>Syringa vulgaris</i> var.	common lilac	leaves are triangular, shrub is usually multi-stemmed	ornamental species	showy flowers in May
<i>Tilia americana</i>	European linden	large, heart-shaped leaves	moist, deciduous woods	dominant species
<i>Tsuga canadensis</i>	eastern hemlock	small, flat needles; standard Christmas tree shape	climax forest; upland moist, well-drained soils	hemlock woolly adelgid
<i>Ulmus americana</i>	American elm	vase-shaped; pendulous branchlets	floodplains; soil adaptable; flood tolerant	Dutch elm disease
<i>Ulmus rubra</i>	red elm	fuzzy leaf undersides	stream banks, wet sites	hard, strong wood
<i>Viburnum trilobum</i>	cranberrybush viburnum	multi-stemmed shrub; red berries persistent	wet areas; bogs	northern species

**Table 2.** Trees found at the Hebert Arboretum (in the area currently under study—this list does not include trees from the previous inventory). Tree identification characteristics, native habitat, and comments are also provided.



Table 3.

<u>Invasives</u>	<u>Common name</u>	<u>Characteristics</u>	<u>Habitat</u>	<u>Comments</u>
<i>Acer platanoides</i>	Norway maple	lobed, opposite, dark green leaves	street tree that has invaded parks and forests	leafs out earlier than native maples
<i>Berberis thunbergii</i>	Japanese barberry	small thorns, bright red berries persist in winter	ornamental shrub that has invaded forests	not browsed by deer
<i>Lonicera tartarica</i>	Tartarian honeysuckle	light green leaves, prolific red berries	invades disturbed sites	spread by wildlife that eat the berries; can survive in poor soil conditions
<i>Berberis vulgaris</i>	common barberry	small thorns and leaves are a little bigger than its cousin	ornamental shrub that has invaded forests	not browsed by deer
<i>Celastrus orbiculatus</i>	Oriental bittersweet	prolific bright orange berries, circular leaf shape	grows best on disturbed sites	birds spread seeds through berry consumption
<i>Lythrum salicaria</i>	purple loosestrife	showy purple flowers in summer	wetland invasive	
<i>Rhamnus frangula</i>	glossy buckthorn	shiny, dark green leaves; dark berries	forest understory	successfully shades competition and creates pure stands
<i>Rosa multiflora</i>	multiflora rose	very thorny	grows best on disturbed sites	not browsed by deer

**Table 3.** Invasive trees and shrubs found at the Hebert Arboretum (in the area currently under study—this list does not include trees from the previous inventory).

Table 4.

<u>Zone 5a</u>	
<i>Aralia spinosa</i>	Devil's walkingstick
<i>Betula nigra</i>	black birch
<i>Carya glabra</i>	pignut hickory
<i>Catalpa speciosa</i>	northern catalpa
<i>Cercis canadensis</i>	eastern redbud
<i>Crataegus nitida</i>	winterking hawthorn
<i>Crataegus phaenopyrum</i>	common hawthorn
<i>Disopyros virginiana</i>	persimmon
<i>Fraxinus quadrangulata</i>	blue ash
<i>Gymnocladus dioica</i>	Kentucky coffeetree
<i>Hamamelis virginiana</i>	common witchhazel
<i>Liriodendron tulipifera</i>	tuliptree
<i>Maclura pomifera</i>	osage-orange
<i>Magnolia acuminata</i>	cucumber magnolia
<i>Morus rubra</i>	red mulberry
<i>Nyssa sylvatica</i>	sourgum
<i>Ostrya virginiana</i>	hophornbeam
<i>Pinus rigida</i>	pitch pine
<i>Pseudotsuga taxifolia</i>	douglasfir
<i>Ptelea trifoliata</i>	common hoptree
<i>Quercus coccinea</i>	scarlet oak
<i>Quercus montana</i>	chestnut oak
<i>Quercus palustris</i>	pin oak
<i>Rhus copallina</i>	winged sumac
<i>Taxodium distichum</i>	baldcypress

<i>Viburnum rufidulum</i>	rusty blackhaw
<u>Zone 5b</u>	
<i>Carya tomentosa</i>	mockernut hickory
<i>Chionanthus virginicus</i>	white fringetree
<i>Cornus florida</i>	flowering dogwood
<i>Halesia carolina</i>	Carolina silverbell
<i>Quercus marilandica</i>	blackjack oak
<i>Sassafras albidum</i>	sassafras
<u>Zone 6</u>	
<i>Carya illinoensis</i>	pecan
<i>Cotinus americanus</i>	common smoketree
<i>Franklinia alatamaha</i>	franklinia
<i>Liquidambar styraciflua</i>	sweetgum
<i>Oxydendrum arboreum</i>	sourwood

**Table 4.** Trees that exhibit marginal hardiness in zones 5 and 6. Zone 5 is divided into groups "a" and "b", which reflect the lower and higher annual minimum temperature range ("a" temperatures are closer to minus twenty Fahrenheit, "b" temperatures are closer to minus ten Fahrenheit. Some trees are currently found at the arboretum. Planting location will also affect hardiness, as southerly exposures offer more warmth than northerly exposures.

**Table 5.**

<u>Trail Marker</u>	<u>Management Needs</u>
1) wildflower meadow	annual mowing or burning
2) basswood in pioneer regeneration hedge	periodic cutting leaving seed source
3) Austrian pine	remove competing vines and clear view of pine
4) black cherry grove	see table 1
5) Crimson King maples	remove Norway maples from regeneration area
6) black willow by pond	prune deadwood
7) pioneer regeneration	periodic cutting leaving seed source
8) maturing forest	none
9) specimen red oak and sugar maples	see table 1
10) white ashes infested by ash decline	remove dead branches and leave trunk for wildlife
11) American beech grove	none
12) tamarack bog	maintain water flow to suppress succession
13) sugar maples	see table 1
14) sugar maples	see table 1
15) upper pond, cottonwood	see table 1

**Table 5.** Management needs corresponding to trail markers from the interpretative trail. For each area, though not specifically mentioned, removal and management of invasive plants is paramount.

Table 6.

Agromony
Artichoke, Jerusalem
Aster, heart-leaved
Aster, heath
Aster, large salt-marsh
Aster, Lowrie
Aster, New England
Aster, panicled
Baneberry, red
Baneberry, white
Basil, wild
Bellflower, creeping
Bellwort, large-flowered
Bellwort, sissile-leaved
Bergamot, wild
Bindweed, pink hedge
Black-eyed Susan
Blackberry
Bloodroot
Blueberry, high-bush
Blueberry, low-bush
Bluets
Boneset
Burdock
Buttercup
Campion, bladder
Cattail, common
Chickweed
Chicory
Cinquefoil, bushy
chokeberry
Dittany

Fleabane, common
Fleabane, daisy
Forget-me-not
Gentian, fringed
Geranium, wild
Goatsbeard, yellow
Golden Alexander
Goldenrod spp.
Hawkweed, field
Heal-all
Hellbore, flase
Hemlock parsley
Herb Robert
Hog-peanut
Jewelweed, orange
Jewelweed, yellow
Knapweed, spotted
Lily, trout
Lobelia, spiked
Loosestrife, fringed
Madder, wild
Marigold, marsh
Meadow rue, early
Meadow rue, tall
Milkweed, common
Miterwort
Moneywort
Mustard, field
Mustard, garlic (invasive)
Parsnip, wild
Pineapple weed
Plantain, Robin's

Primrose, evening
Queen Anne's Lace
Rose, pasture
Sarsaparilla, wild
Silverweed
Solomon Seal, false
Spring Beauty
Spurge, cypress
St. Johnswort
Stitchwort, lesser
Strawberry
Thimbleweed
Thistle, bull
Thistle, Canada
Trefoil, birdsfoot
Turtlehead
Vetch, cow
Vetch, crown
Violet, blue
Violet, long-spurred
Violet, pinkish-white
Violet, purple
Violet, white
Violet, yellow
Virgin's bower
Waterleaf, Virginia
White Star
Wild Thyme
Wood Sorrel, yellow

Table 6. Wildflowers at Springside Park (common names given).

## The Springside Park Wildlife Sanctuary, *Proposal as Part of Springside Park Master Plan*

By Victor C. Capelli, Naturalist of Springside Park Emeritus

### **Overview**

Springside Park contains at least five different wildlife habitats and a rich wildflower/tree community which should be preserved as part of the Springside Park Master Plan, being worked on by Brian Gibbons.

**I Natural woods;** of a typical New England, mesic forest community dominated by oaks, maples, cherries, ash hickories, and other tree species. At least 50 species identified so far. A list of species is at the end of this paper.

**II Wetlands** containing cattail marsh, vernal pools, and ponds, and which is home to a rich variety of wildflowers, invertebrates, mammals and migratory water fowl and song birds.

**III Relic New England field/forest interface** composed of extensive deciduous ecotone and mature deciduous forest. A valuable living laboratory for school kids as part of an environmental education program.

**IV Examples of Upland New England field succession;** complete with herb, forb and tree pioneer species.

**V A Migratory Bird ‘Funnel’.** Because Springside Park is at the heart of Pittsfield, during the spring and fall, dozens of migratory bird species, Wood Warblers, vireos, tanagers, and other songbirds (including raptors) pass through, nest and use the park as part of their migratory route.

**VI Edaphic Soil/Plant Community.** Because of the limestone bedrock underneath much of Springside Park, and because of the basic water P.H. there is a tremendous variety of wildflower, shrub and tree species; unique to mild soil type. There are over a hundred species of wildflowers identified so far. Springside Park is one of three places out of nine that Phyllis Pryzby has visited in Berkshire County, which has flowers that grow in the limey soil around the springs. The other two places are Tyringham Cobble and Bartholomew’s Cobble. This should be preserved, because we might have a rare animal or plant species, unique to Berkshire County

**VI Micro-Niches and Habitats** within the ‘critical’ area of Springside Park (see map) are home to animals and plants and nowhere else in the park, because of limiting ecological factors, i.e. moisture, soil temperature, light, succession stage and ‘micro-climate.’

**VIII Relic Forest;** Springside Park has relic tree and plant communities dating to the turn of the century and should be preserved, if for no other reason as part of a living environmental classroom. Specifically, old Sugar Maples (*Acer Saccharum*), Black Cherry (*Prunus Serotina*), American Beech (*Fagus Sp.*), Northern Red Oaks (*Quercus Robur*), Canadian Hemlock (*Tsuga Canadensis*), and White Pine (*Pinus Strobus*).

It is imperative that Springside Park’s unique natural history be considered as part of the overall Master Plan, as part of a systematic state wide plan for conservation of plant and animal communities in the state of Massachusetts.

The three elements of Springside including the arboretum, recreational areas and the natural community should be integrated into one package that the public should enjoy. The environmental education element should have equal weight, or at least the opportunity to develop in the context of an overall Master Plan. Very few parks in the state have an ongoing “environmental education” component complementing the other aspects of park use. Springside Park could be one of those park!

### **Resident Bird Species of Tree and Shrub Species of Springside Park**

Blue Jay, Black-Capped Chickadee, White-Breasted Nuthatch, Red-breasted Nuthatch, Crow, Raven, Fish Crow, Pigeon, Starling, House Sparrow, Song Sparrow, Chipping Sparrow, Tree Sparrow, White-throated sparrow, Downy Woodpecker, Flicker, Hairy, Red-bellied Woodpecker, Pileated Woodpecker, Cedar Waxwing, Robin, Bluebird, Red-tailed Hawk, Sharp-shinned Hawk, Sparrow Hawk, Goldfinches, Red-polls, Cardinal, Brown Creeper, Golden-crowned Kinglet, Screech Owl, Saw-Whet, Long Eared, Great Horned Owl, Herring Gull, Black Duck, Mallard, Great Blue Heron, Osprey, Slated-colored Junco.

These are species which live in Springside Park year-round, with minor migratory variations.

### **Healing Herbs: Healthful Plants and Beneficial Botanicals Found In Springside Park**

In the exciting film, “Medicine Man”, starring Sean Connery, we are greeted with an exciting and romantic scientific search for the cure of cancer, deep in the heart of the South American rain forest. Faced with the ever-impending destruction of the jungle around them, Sean and his equally determined female assistant are forced by haste, scientific mistakes and the vagaries of botanical folklore to hurry and find that elusive plant which may spell salvation for millions of ill people in the world. In the end, Sean and his increasingly romantically attached partner, must go deeper into the woods with their Indian friends, to escape the bulldozer and the chain saw, in order to continue their field work. In reality, the world’s rain forests may indeed have the cure for cancer, but already botanical science has identified hundreds of chemical compounds found in nature, outside of the jungle (such as the Pacific Yew in the Northwest, which has Taxol, that helps people with Ovarian cancer). But time is running out for the determined scientist to find the ‘magic bullet’ hidden in the leafy issues of some tropical plant. Here in the Berkshires, the Native Americans used many of the local plants for everything from constipation, malaria to broken arms, menstrual problems and toothaches. And it’s exciting because we have re-discovered the knowledge that “Nature’s Drugstore” is just outside our doorsteps!

#### **Healing Herbs**

It is extremely important to know what kind of plant you are looking at in order to determine if it is beneficial in use. If you are unsure, do not pick it! A mistake could be fatal. Queen Anne’s lace for example, is native carrot, but it could be confused with Poison Hemlock, because of the lacy leaves. Consult an expert in botanical identification reputable field guides and use only the parts of the plant which contain the therapeutic properties and in the season they are most potent. The following list will give you an idea of some plants found in the Berkshires which fall in the category of Healing Herbs.

Heal-all or self-heal: leaves used for sore throat gargle. Common Plantain: leaves and seeds source of laxatives-Psyllium seeds. Butter and Eggs: crushed leaves used as ointment for piles and skin eruptions, Jewelweed: leaves and stems used as poultice for Poison Ivy rash. Red Clover: flowers used as a blood purifier, expectorant, sedative, a cure for bronchitis, athlete’s foot, colic, boils, ulcers and the famous Hoxsey cancer treatment. Chicory: besides the coffee substitute in its root, chicory has also been used as a diuretic and a laxative, “cardiotonic” and sedative. Peppermint: leaf tea used for headaches, indigestion, gas, insomnia, nervous tension, extracts have been proven effective against Herpes and Newcastle Disease. It stops smooth muscle cramps. Spearmint: leaf tea used for stomachaches, anti-septic, anti-spasmodic, folk remedy used to treat diarrhea, colds, cancer, fevers, and headaches. Wild Ginger: roots used for cough and sore throat, contains anti-tumor chemical Aristolochic acid, makes you sweat. Also used for “female ailments.” Pineapple Weed: an alien plant which makes an excellent tea.



# Wildflower List - Springside Park:

1 agrimony	53 ginger, wild	102 sarsaparilla, wild (many)
2 artichoke, Jerusalem	54 goatsbeard, yellow	103 silverweed
3 aster, heart-leaved	55 golden alexander	104 Solomon's seal, false
4 aster, heath	56 goldenrod, 12 species	105 Solomon's seal, true
5 aster, large salt marsh	57 goldenrod, blue-stemmed	106 spreading dogbane
6 aster, lowrie	58 goldenrod, Canada	107 spring beauty
7 aster, many-flowered	59 goldenrod, grass-leaved	108 spurge, cypress (many)
8 aster, new england	60 goldenrod, rough-leaved	109 St. Johnswort
9 aster, panided	61 goldenrod, rough-stemmed	110 stitchwort, lesser 1
10 aster, purple-stemmed	62 goldenrod, zig-zag	111 strawberry
11 aster, schreber's or large-leaved	63 grass, blue-eyed	112 sweet cicely
12 aster, small white	64 hawkweed, field	113 thimbleweed
13 aster, stiff	65 hawkweed, orange (devil's paintbrush)	114 thistle, bull
14 aster, upland white (one plant)	66 heal-all	115 thistle, Canada
15 aster, white wood	67 hellbore, false	116 toothwort
16 baneberry, red	68 hemlock parsley	117 trefoil, birdsfoot
17 baneberry, white	69 hepatica, round-lobed	118 trillium, red (purple)
18 basil, wild	70 herb Robert	119 turtlehead
19 bellflower, creeping	71 hog-peanut	120 vetch, cow
20 bellwort, large flowered	72 honeysuckle, Japanese	121 vetch, crown
21 bellwort, sessile-leaved	73 honeysuckle, trumpet	122 violet light blue with dark center
22 bergamot, wild	74 iris, yellow	123 violet, blue
23 bindweed, pink hedge	75 jack-in-the-pulpit (many)	124 violet, long spurred
24 black-eyed susan	76 jewelweed, orange (spotted touch-me-not)	125 violet, long-spurred
25 blackberry	77 jewelweed, yellow (pale touch-me-not)	126 violet, pinkish white
26 bloodroot	78 joe pye weed, spotted	127 violet, purple
27 blue-eyed grass, white	79 knapweed, spotted	128 violet, white
28 blueberry, high bush	80 lily, trout	129 violet, yellow
29 blueberry, low bush	81 lobelia, spiked	130 virgin's bower
30 bluets	82 loosestrife, fringed	131 waterleaf, Virginia
31 boneset	83 loosestrife, purple (invasive)	132 white star
32 bur marigold, nodding	84 madder, wild	133 wild thyme
33 burdock	85 marigold, marsh (many)	134 wood sorrel, yellow
34 butter and eggs	86 meadow rue, early	135 yarrow
35 buttercup	87 meadow rue, tall	
36 campion, bladder	88 milkweed, common	
37 cattail, common	89 miterwort	
38 cattail, narrow-leaved	90 moneywort	
39 chickweed	91 mt. mint, narrow-leaved	
40 chicory	92 mustard, field	
41 chokeberry, red	93 mustard, garlic (many)	
42 cinquefoil, bushy	94 nightshade, enchanter's	
43 clover, white sweet1 agrimony	95 parsnip, wild	
44 cohosh, black	96 pineapple weed	
45 columbine, wild	97 plantain, robin's	
46 daisy, oxeye	98 primrose, evening	
47 dittany	99 queen anne's lace (wild carrot)	
48 fleabane, common	100 rose, multiflora	
49 fleabane, daisy	101 rose, pasture	
50 forget-me-not		
51 gentian, fringed		
52 geranium, wild		



The HEBERT ARBORETUM

## At Springside Park Tree List

Key to Latin Names Found In Inventory of Existing Vegetation

1. Acer Rubrum - Red Maple
2. Malus X - Crab Apple
3. Malus X - Crab Apple
4. Acer Saccharinum - Silver Maple
5. Acer Saccharinum - Silver Maple
6. Malus X - Crab Apple
7. Acer Saccharinum - Silver Maple
8. Acer Saccharinum - Silver Maple
9. Acer Saccharinum - Silver Maple
10. Acer Saccharinum - Silver Maple
11. Acer Saccharinum - Silver Maple
12. Malus X - Crab Apple
13. Acer Silver-Sugar Maple
14. Acer Silver-Sugar Maple
15. Acer Silver-Sugar Maple
16. Acer Silver-Sugar Maple
17. Acer Silver-Sugar Maple
18. Acer Silver-Sugar Maple
19. Acer Silver-Sugar Maple
20. Malus X - Crab Apple
21. (Unknown)
22. Malus X - Crab Apple
23. Malus X - Crab Apple
24. Malus X - Crab Apple
25. Malus X - Crab Apple
26. Crataegus Phaenogynum - Washington Hawthorn
27. Acer Saccharinum - Silver Maple
28. Acer Saccharinum - Silver Maple
29. Acer Saccharinum - Silver Maple
30. Acer Saccharinum - Silver Maple
31. Acer Saccharinum - Silver Maple
32. Acer Saccharinum - Silver Maple
33. Acer Saccharinum - Silver Maple
34. Acer Saccharinum - Silver Maple
35. Acer Saccharinum - Silver Maple
36. Syringa Vulgaris - (Lilac?)
37. Syringa Vulgaris - (Lilac?)
38. Malus X - Crab Apple
39. Acer Rubrum - Red Maple
40. Betula Columnaris - Birch Columnar
41. Betula Columnaris - Birch Columnar
42. Quercus Ballustris - Pin Oak
43. Fagus Americana - (Grandifolia) American Beech
44. Malus X - Crab Apple
45. Malus X - Crab Apple
46. Malus X - Crab Apple
47. Malus X - Crab Apple
48. Crataegus Phaenogynum - Washington Hawthorn
49. Acer Saccharinum - Silver Maple
50. Acer Saccharinum - Silver Maple
51. Juglans Cinerea - Walnut (?)
52. Acer Saccharinum - Silver Maple
53. Juglans Cinerea - Walnut (?)
54. Malus X - Crab Apple
55. Acer Saccharinum - Silver Maple
56. Crataegus Laevigata - Hawthorn
57. Crataegus Phaenogynum - Washington Hawthorn
58. Acer Saccharinum - Silver Maple
59. Vaccinium Cornuborum (?)
60. Prunus Serotina - Cherry (Oriental)
61. Prunus Serotina - Cherry (Oriental)
62. Acer Saccharinum - Silver Maple
63. Crataegus Phaenogynum - Washington Hawthorn
64. Crataegus Phaenogynum - Washington Hawthorn
65. Acer Saccharinum - Silver Maple
66. Acer Saccharinum - Silver Maple
67. Acer Saccharinum - Silver Maple
68. Crataegus Laevigata - (?) Hawthorn
69. Acer Saccharinum - Silver Maple
70. Acer Saccharinum - Silver Maple
71. Acer Rubrum - Red Maple
72. Betula Papyrifera - Paper Birch
73. Crataegus Phaenogynum - Washington Hawthorn
74. Crataegus Phaenogynum - Washington Hawthorn
75. Crataegus Laevigata - (?) Hawthorn
76. Acer Saccharinum - Silver Maple
77. Crataegus Phaenogynum - Washington Hawthorn
78. Crataegus Laevigata - (?) Hawthorn
79. Acer Saccharinum - Silver Maple
80. Crataegus Phaenogynum - Washington Hawthorn
81. Crataegus Phaenogynum - Washington Hawthorn
82. Acer Saccharinum - Silver Maple
83. Acer Saccharinum - Silver Maple
84. Acer Saccharinum - Silver Maple
85. Acer Saccharinum - Silver Maple
86. Crataegus Phaenogynum - Washington Hawthorn
87. Acer Saccharinum - Silver Maple
88. Acer Saccharinum - Silver Maple
89. Acer Saccharinum - Silver Maple
90. Crataegus Phaenogynum - Washington Hawthorn
91. Crataegus Phaenogynum - Washington Hawthorn
92. Pinus Sylvestris - (?) Pine
93. Acer Saccharinum - Silver Maple
94. Acer Saccharinum - Silver Maple
95. Acer Saccharinum - Silver Maple
96. Acer Saccharinum - Silver Maple
97. Acer Saccharinum - Silver Maple
98. Acer Saccharinum - Silver Maple
99. Crataegus Phaenogynum - Washington Hawthorn
100. Crataegus Phaenogynum - Washington Hawthorn
101. Acer Saccharinum - Silver Maple
102. Crataegus Phaenogynum - Washington Hawthorn
103. Acer Saccharinum - Silver Maple
104. Acer Saccharinum - Silver Maple
105. Crataegus Phaenogynum - Washington Hawthorn
106. Acer Saccharinum - Silver Maple
107. Acer Saccharinum - Silver Maple
108. Acer Saccharinum - Silver Maple
109. Acer Saccharinum - Silver Maple
110. Acer Saccharinum - Silver Maple

111. *Acer Saccharinum* - Silver Maple
112. *Betula Papyrifera* - Paper Birch
113. *Betula Papyrifera* - Paper Birch
114. *Cornus Phaeococcum* - Washington Hawthorn
115. *Betula Papyrifera* - Paper Birch
116. *Vaccinium Cornubosum* (?)
117. *Cornus Phaeococcum* - Washington Hawthorn
118. *Malus X* - Crab Apple
119. *Acer Rubrum* - Red Maple
120. *Acer Saccharinum* - Silver Maple
121. *Acer Saccharinum* - Silver Maple
122. *Acer Saccharinum* - Silver Maple
123. *Acer Saccharinum* - Silver Maple
124. *Ulmus Americana* - American Elm
125. *Acer Saccharinum* - Silver Maple
126. *Acer Saccharinum* - Silver Maple
127. *Betula Papyrifera* - Paper Birch
128. *Acer Saccharinum* - Silver Maple
129. *Acer Saccharinum* - Silver Maple
130. *Acer Saccharinum* - Silver Maple
130. *Acer Saccharinum* - Silver Maple
131. *Acer Saccharinum* - Silver Maple
132. *Juglans Cinerea* - Walnut (?)
133. *Malus X* - Crab Apple
134. *Acer Platanoides* - Norway Maple
135. *Acer Platanoides* - Norway Maple
136. *Aesculus Lincocatanum* - Common Horse Chestnut
137. *Acer Saccharinum* - Silver Maple
138. *Syringa Vulgaris* - Lilac (?) Common
139. *Acer Platanoides* - Norway Maple
140. *Acer Platanoides* - Norway Maple
141. *Acer Platanoides* - Norway Maple
142. *Syringa Vulgaris* - Lilac
143. *Acer platanoides* - Norway Maple
144. *Acer Platanoides* - Norway Maple
145. *Magnolia Stellata* - Star Magnolia
146. *Acer Saccharinum* - Silver Maple
147. *Acer Saccharinum* - Silver Maple
148. *Syringa Vulgaris* - Common Lilac
149. *Syringa Vulgaris* - Common Lilac
150. *Acer Saccharinum* - Silver Maple
151. *Acer Saccharinum* - Silver Maple
152. *Acer Saccharinum* - Silver Maple
153. *Acer Saccharinum* - Silver Maple
154. *Acer Saccharinum* - Silver Maple
155. *Acer Saccharinum* - Silver Maple
156. *Pinus Sylvestris* - (?) Pines
157. *Pinus Sylvestris* - (?) Pines
158. *Cornus Phaeococcum* - Washington Hawthorn
159. *Vaccinium Cornubosum* (?)
160. *Cornus Kousa* - Kousa Dogwood
161. *Acer Saccharinum* - Silver Maple
162. *Acer Saccharinum* - Silver Maple
163. *Acer Saccharinum* - Silver Maple
164. *Acer Saccharinum* - Silver Maple
165. *Acer Saccharinum* - Silver Maple
166. *Acer Saccharinum* - Silver Maple
167. *Acer Platanoides* - Norway Maple
168. *Acer Platanoides* - Norway Maple
169. *Cornus Kousa* - Kousa Dogwood
170. *Prunus X* - Cherry (Flowering)
171. *Prunus X* - Cherry (Flowering)
172. *Syringa Vulgaris* - Common Lilac
173. *Syringa Vulgaris* - Common Lilac
174. *Syringa Vulgaris* - Common Lilac
175. *Liriodendron Tulicifera* - Tulip Tree
176. *Sorbus Aucunaria* - European Mountain Ash
177. *Platanus X Acerifolia* - London Plane Tree
178. *Quercus Rubra* - Red Oak (?)
179. *Quercus Rubra* - Red Oak (?)
180. *Acer Saccharinum* - Silver Maple
181. *Prunus X* - Cherry (Flowering)
182. *Acer Saccharinum* - Silver Maple
183. *Pinus Sylvestris* - Pine (?)
184. *Acer Saccharinum* - Silver Maple
185. *Acer Saccharinum* - Silver Maple
186. *Acer Saccharinum* - Silver Maple
187. *Fraxinus Americana* - White Ash
188. *Betula Papyrifera* - Paper Birch
189. *Betula Papyrifera* - Paper Birch
190. *Acer Saccharinum* - Silver Maple
191. *Acer Saccharinum* - Silver Maple
192. *Acer Saccharinum* - Silver Maple
193. *Acer Saccharinum* - Silver Maple
194. *Hydrangea Arhorensens*
195. *Hydrangea Arhorensens*
196. *Hydrangea Arhorensens*
197. *Juglans Cinerea* - Walnut
198. *Hydrangea Arhorensens*
199. *Eunonymus Alatus*
200. *Eunonymus Alatus*
201. *Platanus X Acerifolia* - London Plane Tree
202. *Platanus X Acerifolia* - London Plane Tree
203. *Cotoneaster Divaricatus*
204. *Mugho Pine*
205. *Acer Saccharinum* - Silver Maple
206. *Hydrangea Arhorensens*
207. *Hydrangea Arhorensens*
208. *Hydrangea Arhorensens*
209. *Prunus X* - Cherry (Flowering)





1:10,000

Mass State Plane Projection

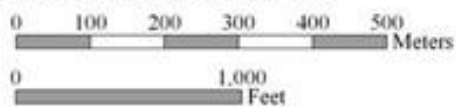
## Springside Park

243 Acres in Pittsfield, MA

© Berkshire Natural Resources Council 2003

Data from Mass GIS and BNRC

Not to be used for conveyance.



Subj: Springside Park  
Date: 1/28/04 1:37:20 PM Pacific Standard Time  
From: nschroeder@bnrc.net (Narain Schroeder)  
To: ekulas@cs.com

File: springside\_park.jpg (383014 bytes) DL Time (115200 bps): < 1 minute  
Elizabeth:

Attached is a map of Springside park with the soils data on it. There is Prime agricultural soils (PrB) on the site. These soils are a State protected resource. It might be appropriate to have an arboretum on prime ag. soils but not playing fields. Don't know but it is something to look into.

Best, Narain

\*\*\*\*\*

Narain Schroeder  
Director  
Berkshire Natural Resources Council  
20 Bank Row  
Pittsfield, MA 01201

Tel: (413) 499-0596  
Fax: (413) 499-3924

\*\*\*\*\*

Elizabeth:

The map is a USGS map with a soils data layer overlaid on it. The colors on the map are the standard colors from a USGS map. Grey is development, Green is forest cover, and light green or no color is open fields. The soils data layer is the black outlined polygons on the map, each polygon has a 2 or 3 letter soil designation in it to identify the soil type. The Prime Agricultural Soils at Springside Park are: AmB, PrB, HeB. Paste the link below into your browser for more info.

[http://www.state.ma.us/dfa/legal/statutes/apr/exec\\_order\\_193.htm](http://www.state.ma.us/dfa/legal/statutes/apr/exec_order_193.htm)  
mass.gov

General Laws of the Commonwealth of Massachusetts  
Mass. Executive Order #193  
By His Excellency EDWARD J. KING  
Governor  
**PRESERVATION OF STATE OWNED AGRICULTURAL LAND**

Preamble

Agricultural land In Massachusetts is a finite natural resource that is threatened by competing land use pressure.

The natural resource qualities associated with agricultural land make state owned agricultural land an irreplaceable economic and environmental asset when utilized for food production. This land is part of the "common wealth" of Massachusetts citizens, and the wise use and conservation of state-owned agricultural land is of broad public value. As the loss of private agricultural land in the Commonwealth continues, the state-owned land will play an increasingly important role for the state's remaining farmers and young people who wish to enter farming. As the state-owned agricultural land decline in productivity and efficient utilization, so does the maximum return of benefit to the citizens, of the Commonwealth.

Furthermore, the loss of agricultural land has had a detrimental effect upon environment quality. Agricultural land reduces flooding by effectively absorbing precipitation, while replenishing critical ground water supplies. The open



characteristic and natural vegetation of agricultural land helps purify the air; enhances wildlife habitat; provides for recreation; and maintains the landscape's aesthetic and historic quality. Therefore, it is essential to ensure that the Commonwealth's agricultural land remains available for present and future generations.

WHEREAS, the Commonwealth seeks to preserve the productive agricultural land base on which the Massachusetts agricultural industry and the people of the Commonwealth depend; and

WHEREAS, state acquisition programs administered by the Department of Environmental Affairs, pursuant to G.L.c. 132 A, secs 11A-11E and G.L.c. 184 secs 31-33, promote the preservation of private agricultural land; and

WHEREAS, it is the policy of the Executive Department of the Commonwealth of Massachusetts to protect, through the administration of current programs and laws, the Commonwealth's agricultural land base from irreversible conversion to uses which result in its loss as an essential food production and environmental resource;

NOW THEREFORE, I, Edward J. King, Governor of the Commonwealth of Massachusetts, by virtue of the authority vested in me by the Constitution and laws of the Commonwealth, do hereby order and direct all relevant state agencies to seek to mitigate against the conversion of state-owned agricultural land and adopt the policies herewith:

1. State funds and federal grants administered by the state shall not be used to encourage the conversion of agricultural land to other uses when feasible alternatives are available.
2. State Agency actions shall encourage the protection of state-owned agricultural land by mitigating against the conversion of state-owned land to non-agricultural uses, and by promoting soil and water conservation practices.
3. The Secretary of Environmental Affairs shall identify state-owned land suitable for agricultural use according to the following criteria:
  - a. the presence of soil types capable of supporting or contributing to present or potential commercial agriculture
  - b. current and historic use for agriculture, and
  - c. absence of non-farm development.
4. State Agencies controlling state-owned land suitable for agricultural use shall coordinate agricultural land management policy with the Executive Office of Environmental Affairs. In managing said land, State Agencies shall be encouraged to allow for use on a multiple year basis for forage and food crops.
5. Surplus state-owned land, identified as suitable for agriculture by the Secretary of Environmental Affairs, shall remain available for agriculture when compatible with state agency objectives.
6. For purposes of this Executive Order, "agricultural land" shall be defined as land classified Prime, Unique, or of State and Local Importance by the USDA Soil Conservation Service, as well as land characterized by active agricultural use.
7. For the purposes of this Executive Order, "state-owned land" shall be defined as:
  - a. all land under the custody or control of a state agency,
  - b. all lands purchased in whole or in part with state funds or federal funds administered by the state.

Given at the Executive Chamber in Boston this 19th day of March in the year of our Lord one thousand nine hundred and eighty one and of the Independence of the United States of American two-hundred and five

Edward J. King Governor, Commonwealth of Massachusetts

## **Donald Walker, Conway School of Design**

### **Arbor Day 2000**

I am pleased to have been invited to speak on this Arbor Day 2000 at the Vincent J. Hebert Arboretum to honor the role of trees and plants in our lives. I am sure that each of you can remember the special time when plants became important in your life. My interest in plants started way back in the 1940-s when I lived in The Bronx, New York near the New York botanical Gardens. Even then, the Botanical Gardens were the only nearby place where I could explore, during any season of the year, in the woods beside a meandering brook. I see that a brook and woods are part of this arboretum and I can imagine the pleasure they will bring o the children of Pittsfield, as Vin Hebert desired.

In the short time, since my own childhood, the natural world has shrunk dramatically. The population of this country has doubled, but the forests and wetlands have been affected ten times over. Buildings and roads and chemicals are replacing the natural landscape here in Pittsfield and everywhere in the world. It's as though we refuse to admit that plants make the earth habitable; that the elimination of plants reduces oxygen and food for all living things – including ourselves and our children and grandchildren.

For Berkshire county towns, the average forest cover is still over 70% but Pittsfield's forests are down to less than 30%. Much of these forests, as well as parks, gardens, and nature preserves are occupied by plants introduced from other continents. (Flora of Berkshire County, Massachusetts by Pamela Weatherbee)

As the native plants are displaced, the animals, birds, and insects that rely on them for food and shelter are lost, as well, because of unique, evolutionary relationships between plants and animals as to food, pollination, seed dispersal, and so on. For instance, the fruit of mayapple needs to be at just the right height to be eaten by box turtles which then distribute Mayapple seeds in their scat.

According to the Massachusetts State botanist, in Berkshire County there are 61 species of rare or endangered vertebrate and invertebrate animals, including the Eastern Box Turtle, and 132 state listed plants including some oaks, shadbushes, winterberry, and a viburnum. (State listed species in Berkshire County, MA 4-11-2000) The continuing loss of local biodiversity is recognized by scientists everywhere as a global tragedy.

And the losses are likely to continue until this calamity can no longer be ignored or until we come to our senses and change the way we treat the natural world. When we come to know, respect, and love our local common species, only then will we act to protect, revive, and reconstruct our forests, grasslands, and all the other ecosystems. We need to learn to identify each species and how it plays its role in the complex theater of life. Where will we learn these things> Paul Hawken points that out "Most Americans are more often taught to identify types of cars than types of birds; we can identify 1,000 corporate logos but less than 10 native plants" (Ecology of Commerce, page 214)

Clearly, we don't give plants the respect they deserve. That's enough of the bad news.

Despite deteriorating conditions here in Berkshire County, it is still recognized by the Nature Conservancy as "one of the globally significant LAST GREAT PLACES"\* because of its habitat diversity and biodiversity. And right here is where I see an extraordinary opportunity for the Vincent J. Hebert Arboretum. The arboretum can introduce local children and their parents to your unique region by displaying your native plants, explaining their places in the local ecosystem, and providing a refuge for those that are endangered. For visitors from afar, the Arboretum can be the "overture" to their exploration of surrounding reserves and state forests. The Arboretum can be the center for stewardship information for land managers and highway roadside crews. It can organize and conduct Fall color leaf trips, winter identification walks, spring salamander watches, and summer native plant sales. The Arboretum would provide vital ecological experiences in the City of Pittsfield and the County of Berkshire for your children and your children' children, and mine, too.

The tide would turn: landscapes would be managed for diverse habitats, rare species would increase, native plants would be recognized and revered for their unique niches in local ecosystems. It would not "merely be a question of stopping the cutting of ancient forests, it is literally the task of ...creating the ancient forests of the future." Paul Hawken

I propose this mission as a wonderful opportunity and a serious challenge. And I think Vin would be pleased that the Vincent J. Hebert Arboretum would become known as both heart and mind of one of the world's greatest botanical places.

Plant trees. Plant native trees. I thank you.

\*From: A Guide to Amphibian Watching

When **Christine Yon was Ward 1 Counselor** she spent a lot of time meeting with Springside Park Groups and the organizations identified here. The thought was that area colleges often need adjunct classrooms and because of the very nature of what Springside Park has to offer as an indoor/outdoor classroom this could provide an income stream to help support the park and would be in keeping with the directives of the Master Plan. There was a lot of interest by the area colleges.

## **DRAFT: Springside House & Park** *City of Pittsfield & Higher Education Collaboration Concept Paper*

The City of Pittsfield proposes to renovate the Springside House and utilize its 350 acre Park and Herbert Arboretum to provide a variety of environmental education and professional development workshops for the regions secondary and postsecondary educators. In addition, the City proposes to partner with Berkshire Community College and Massachusetts College of Liberal Arts, and other community-based agencies to offer environmental stewardship opportunities for students throughout Berkshire County.

### *Collaborating Partners*

#### **Berkshire Community College**

Berkshire Community College (BCC) is a leader in environmental and sustainable energy education and training programs. The college's Environmental Science and Biology programs are two popular degree options for students. Because Berkshire County is home to a wide variety of environmental agencies, students have many opportunities for employment after graduation. BCC has recently embarked on a series of environmental initiatives including the development of a Green Team, the purpose of which is to provide informed recommendations on campus-wide sustainable practices; the establishment of a campus recycling program; the implementation of a computer-based energy management system; the sealing of all building envelopes to improve energy efficiency; and a state funded solar panel installation project on most campus buildings. The solar project is the largest roof-mounted array on a public college campus in the state of Massachusetts.

In a comprehensive effort to meet the workforce needs of the region and encourage the development of its green economy, BCC is in the initial stages of developing a Sustainable Energy Resource Training Center as part of its Ralph Hoffman Environmental facility. This "green" training center will feature the most advanced instructional technologies in sustainable energy and will be utilized by Environmental, Biology, Engineering, and Science faculty members as well as local businesses and community members. The center will ultimately address the regional demand for certified Renewable Energy Specialists, Weatherization and Air Sealing Technicians, Photovoltaic Technicians, Energy Auditors, Solar Heating, and Wind System Installers. The college has also established the Stanley Weatherization Training facility for specialized industry training needs. BCC has a long history of serving the community and a partnership with the Springside House and Park could provide complementary out-of-classroom learning experiences for BCC students and faculty as well as professional development opportunities. For example, through collaborations with the Housatonic Valley Association, BCC faculty have developed student internships for a stream survey, dam inventory, and storm drain teams, and GPS supported inventories will be integrated with the updated GIS and imaging technologies to provide current data for the Association. Other partnerships have been formed with the Berkshire Regional Planning Commission and the Center for Ecological Technology. Collaborating with the Springside House and Park would allow BCC students the opportunity to participate in community service projects and co-curricular activities that supplement their classroom experience. In addition, the site could serve as a center for environmental education training and professional development opportunities for elementary school teachers throughout Berkshire County.

#### **Massachusetts College of Liberal Arts**

**Other Partners** To be determined

#### **Project Ideas**

Some project ideas for collaboration with the City of Pittsfield and the Springside House and Park include:

- ❖ Community garden project – student, faculty, and staff participation.
- ❖ Mapping of Springside Park utilizing GIS to identify ecologically sensitive areas.
- ❖ Service learning projects.
- ❖ Environmental education projects – using the arboretum for study of trees, birds and plant species for environmental courses.
- ❖ Student assessment and inventory of native species at Springside Park and Arboretum.
- ❖ Forum series on environmental issues.

#### **Funding Opportunities**

The following foundations support environmental education and/or historic preservation activities:

- ❖ American Express Foundation
- ❖ Berkshire Bank Foundation
- ❖ Motorola Foundation
- ❖ Berkshire Taconic Foundation
- ❖ National Trust Preservation Fund
- ❖ Save America's Treasures
- ❖ Felicia Fund (located in Providence, RI)
- ❖ National Endowment for the Humanities
- ❖ EPA

Springside House & Park - Higher Education Collaboration Concept Paper (2010)