



VEGETATION GUIDE TABLE OF CONTENTS

PURPOSE OF THE GUIDE	1
CLIMATE OF THE TOWN OF UNION	1
VALUES OF VEGETATION	1
USES OF VEGETATION	2
PLANTING GUIDE	2
SOILS	2
PURCHASING	2
LOCATION	3
GROUND PREPARATION AND PLANTING	3
CARE AFTER PLANTING	4
SPECIES DESCRIPTIONS	5
SH - LIMITED HEIGHT STREET TREES	6
SW - LIMITED WIDTH STREET TREES	6
SU - UNLIMITED SPACE STREET TREES	6
C - COMPACTED SOIL OR CONTAINER TREES	6
PL - PARK OR LAWN TREES	6
DS - DECIDUOUS SCREENING PLANTS	7
ES - EVERGREEN SCREENING PLANTS	7
F - FOUNDATION SHRUBS AND ORNAMENTALS	8
G - GROUND COVERS	8
NR - SPECIES NOT RECOMMENDED	8
REFERENCES	19

PURPOSE OF THE GUIDE

A comprehensive vegetation survey was completed by the Environmental Council in the Town of Union, illustrating the need for a vegetation or planting guide. This guide will help to inform public officials, planners, builders and developers of residential, commercial and industrial sites and the community at large of the values, benefits and needs for vegetation as well of plant types, planting, care and maintenance of trees and shrubs. This guide will aid the users in making wise and long-term decisions to improve and beautify the Town.

CLIMATE OF THE TOWN OF UNION

The climate of the Town of Union is classified as a “humid, continental” type climate. The summers are pleasantly warm, while the winters are long and cold with frequent stormy periods.

Temperature: From late November through March and often into April, the temperatures do not exceed 32° F on 60 to 70 days at higher elevations and on 45 to 55 days in the main river valleys.

Frost Season: The average date for the last freeze is about May 5; the first freeze is about October 5. It is unlikely that the first freeze will be after May 25 and before September 20.

Precipitation: The total annual precipitation is from 31.5 to 39 inches, seven out of ten years.

Snowfall: The annual snowfall ranges from 55 to 70 inches in the lower areas and river valleys. In the uplands, the snowfall ranges from 85 to 95 inches per year.

Wind: The wind velocity averages nine miles per hour from June through September. It increases to 12 miles per hour during January, February and March. In general, the prevailing wind direction is westerly throughout most of the year. During the winter and spring, there is a slight northwesterly tendency and, during the summer and fall, a slight southwesterly tendency.

Sunshine: The percentage of possible sunshine in the area is about 60 – 70 percent from June through August, while in November and December, it decreases to about 30 percent. The area has a fairly large percentage (59%) of cloudy days, about 215 days per year.

VALUES OF VEGETATION

The values of vegetation can be divided into two categories: functional and aesthetic. The functional values include shading, heating and cooling, wind breaking, screening, glare control, source of food, space articulation and soil erosion control. Aesthetic values refer to the landscaping and beautification of an area. Additional values, namely air and noise pollution control and the enhancement of a wildlife habitat, relate to both categories.

Larger trees provide shade from the sun, thereby providing a cooling effect. A stand of evergreen trees forms a barrier against wind, thus creating a “heating effect.” Vegetation can be used to screen an undesirable area. Trees reduce glare and reflection near lakes and along highways. Well-maintained fruit and nut trees are a valuable food source. Space articulation refers to the use of vegetation to define adjoining areas. Tree roots are very effective in preventing soil erosion.

As consumers of carbon dioxide and producers of oxygen, trees help to reduce air pollution. Large trees or groups of smaller ones help to absorb excessive noise. In addition, an abundance of trees will psychologically reduce noise pollution by providing a more tranquil setting. Finally, trees will attract wildlife such as birds and squirrels.

USES OF VEGETATION

Vegetation can be used in the urban and suburban environments in several ways. These uses are closely related to the values described on the previous page. Space articulation is exemplified by the use of plantings along a median strip in a parking lot to define traffic lanes. Containerized trees and shrubs and those surrounded by concrete beautify an otherwise barren area. Plantings in front yards of residential neighborhoods would not only beautify, but also could provide shade, a windbreak, food, or attract wildlife.

The use of trees for screening is valuable near businesses, factories and sewage treatment plants. Extensive use of vegetation near a school or playground would act as a buffer for nearby homes. Trees planted along a highway could reduce glare and make driving safer and more pleasant. Other plants known as ground cover are effective in preventing erosion on slopes and/or during construction.

PLANTING GUIDE

Soils

The soils in Broome County are typically moderately to poorly drained with impervious subsoil layers in the upland areas. The soil quality generally declines with an increase of elevation. Soils adjacent to the rivers and creeks are frequently gravelly. Some of these sites are prone to flooding. Soils in urbanized areas are generally too disturbed to be categorized.

For more specific information, refer to the Broome County Soil Survey.

Purchasing

A young tree and/or shrub planted now may best serve a useful future purpose if it is selected to fit the site at maturity. To restore or retain the beauty of your street and/or home, an organized, sustained plan of tree and/or shrub planting and preservation should be undertaken. In order to develop the most beneficial landscaping plan, a consultation (which is usually free of charge) with one of the many Triple Cities landscape supply centers and/or Broome County Cooperative Extension is recommended. When purchasing your trees

and/or shrubs, you should choose those that look healthy and well cared for. Evergreens should have a fresh color and should have a firm, unbroken moist earth ball. Bare-rooted specimens should have their roots protected against drying and should have plump buds, fresh twig color, and firm bark. No tree or shrub should be selected that gives any indication of insects, diseases, or major mechanical injury.

Location

When you select and locate a tree and/or shrub with care it can add much to the beauty and value of your property without causing inconvenience in later years. Good planting practice aims to complete the home-not compete with it. No one tree and/or shrub is perfect for all locations and purposes. The location of the tree and what its future effect may be on your house, sidewalk, wires, sewer, lawn, play space, or flower beds is just as important to consider as its size, shape, rate of growth, and coloring.

There is no simple formula for tree planting that will meet all requirements. However, there are important site limitations; i.e., building setback from street; location of gas, water and sewer pipes, and location of overhead lines. You should plant for both shade and landscape values. Planting to the southeast of an area will provide morning shade and, to the southwest, afternoon shade. For wide areas, medium sized spreading forms of landscape should be selected. Under all overhead obstructions, globe or dwarf upright landscape species should be selected. For narrow areas, columnar landscape forms should be used.

Ground Preparation and Planting

Spring and fall are the traditional planting times. In the spring, all trees may be easily moved after the ground has dried enough to be workable and before new leaves appear. In the fall, trees that lose their foliage may be easily moved at any time after the leaves have dropped. Evergreens may be safely moved during late summer or very early fall.

To do well, a tree or shrub must be planted in a soil that supplies its roots with air as well as with water and adequate nutrient elements. The level below the planting hole must, therefore, be capable of permitting drainage, or artificial drainage must be installed. The planting hold itself should be filled with a loose soil which retains moisture but which does not puddle. Light sand or heavy clay are undesirable and can be corrected by addition of sufficient organic matter such as peat moss, compost, leaf mold, or well-rotted manure. Depending on the quality of the existing soil, up to 50 percent of volume of such material may be required. All materials used should be thoroughly mixed.

It is best to have the hole dug before the tree or shrub is delivered. All planting holes should be as wide at the bottom as they are at the top. In the case of a tree that is moved with bare roots, the diameter of the hole should be somewhat wider than the span of the roots. In the case of evergreens, the diameter of the hole should be approximately 18 inches wider than the diameter of the ball of earth that encases its roots.

Every effort should be made to plant the tree in a vertical position and at the same depth as the dirt ring on the tree trunk indicates it was formerly set at. The tree should be

placed on a good bed of well-prepared soil. With trees that are moved with an earth ball, it is not necessary to remove the entire covering of burlap. Some of it may be cut away without lifting the ball after the tree is correctly placed. With bare-root stock, all roots should be spread out and should be pointed away from the main trunk. If a single root is especially long, it should be cut off. It should never be bent. If more than single root exceeds the planting space, the hole is too small.

When backfilling, the soil should be well worked around each root or with balled plants under the earth ball so that no air pockets remain. As insurance against air pockets, the soil should be thoroughly tamped. With bare rooted plants, this should not be done until after the roots are well covered. Water should then be filled in the hole to further settle the soil. Once water has been added, no further tamping should be done, but the remainder of the hole should be back filled with loose soil.

Newly planted trees should be supported by driving 2" x 2" x 8" stakes on opposite sides of the tree about one foot away from the trunk. Driving them 18 inches below the elevation of the bottom of the hole will ensure sufficient support. If they are driven before backfilling, no root injury will occur. The link between the stakes and the tree should be a wire run through a piece of hose. Staking of small trees moved with a ball of earth is not usually necessary.

Care After Planting

Once the tree is in place, regular inspections for tree troubles are a wise precaution. To keep the tree or shrub in a vigorous state, watering during dry spells for the first few years is necessary. Too frequent watering is as harmful as no watering. Water deeply and thoroughly, but repeat only when necessary. Evergreens should be watered thoroughly just before the ground freezes in the fall.

One of the most beneficial procedures for the conservation of moisture is the addition of mulch. A two to four inch layer of such materials as peat moss, compost, leaf mold, or well-rotted manure spread over the entire root will pay dividends.

Vigorous growth can be encouraged by the addition of a fertilizer. A single rule to follow is to apply one pound per inch of trunk diameter the first year, two pounds per inch the second year, and three pounds per inch the third year. After the third year, three to five pounds per inch may be used. When spreading the fertilizer, it is well to start a little distance from the trunk and cover to a short distance beyond the spread of the branches. The fertilizer should be thoroughly watered in after spreading.

In moving a tree, some roots are always lost. This is especially true of the fine roots that supply a tree with the bulk of its water and nutrient elements. Broken and ragged root ends should be cut clean.

With the exception of evergreens, which are generally not top pruned, it is customary to compensate for the root loss by removing 30 – 50 percent of the top growth. When removing entire branches, each branch should be cut flush with the branch or trunk from which it arises. When cutting off parts of branches, each cut should be made so that there is

a living bud at the end of each stub. Broken branches, rubbing branches and V-crotches in trees that do not typically have them are all likely candidates for correction. It is wise to preserve the top of single trunk that runs from the base to the top of the tree.

SPECIES DESCRIPTIONS

In this chapter, trees, shrubs, and ground cover are categorized and listed according to their recommended uses. Each species may be listed under more than one category since some plants are versatile. Following the planting use lists are descriptions of each species. Some descriptions contain information about possible insect and disease problems that are common to the particular species in this area. Most problems are controllable, so contact the Broome County Cooperative Extension for more information on controlling pests.

This chapter also includes a list of species that are not recommended for planting in this area. They should be avoided due to their poor growing form, maintenance problems, or high susceptibility to pest problems. In most instances, good substitutes for these species are available from the lists of recommended species.

The descriptions of all species are listed in alphabetical order, according to their common names. The botanical names are given in italics and parentheses in order to avoid confusion among similar species. Next to each description are abbreviations for each planting site category, which are as follows:

- SH** – Street Trees, to be used in areas where height is a major consideration (such as under utility wires).
- SW** - Street Trees, to be used where width is a major consideration, such as narrow median strips or buildings placed close to the street.
- SU** - Street Trees which need large areas (such as rural areas) or where there are underground utility lines.
- C** - Trees which can be used in areas that have compacted soil or in containers.
- PL** - Trees which, because of their size or intolerance to deicing salt, should be planted only in off-street situations.
- DS** - Plants which can be used for screening and will lose their leaves in the autumn.
- ES** - Screening plants that are evergreen.
- F** - Shrubs that can be used as foundation plantings or as ornamentals.
- G** - Plants which can be used as ground cover to prevent erosion and bind the soil in areas where grass is impractical.
- NR** - Species that should be avoided when choosing plant selections.

SH - LIMITED HEIGHT STREET TREES

- Crabapple
- Cockspur Hawthorn
- Goldenrain Tree
- Hedge Maple
- Japanese Maple
- Purple Leaf Plum
- Washington Hawthorn

SW - LIMITED WIDTH STREET TREES

- Hedge Maple
- Norway Maple (columnar)
- Purple Leaf Plum
- Pyramidal European Hornbeam
- Sentry Ginkgo

SU - UNLIMITED SPACE STREET TREES

- Bradford Pear
- Christine Buisman Elm
- European Mountain Ash
- Ginkgo
- Hop Hornbeam
- Japanese Pagoda Tree
- Little Leaf Linden
- Marshall Seedless Ash
- Norway Maple
- Pin Oak
- Red Oak
- Thornless Honey Locust

C - COMPACTED SOIL OR CONTAINER TREES

- Amur Maple
- Cockspur Hawthorn
- Flowering Dogwood
- Goldenrain Tree
- Hedge Maple
- Hop Hornbeam
- Japanese Maple
- Japanese Pagoda Tree
- Little Leaf Linden
- Purple Leaf Plum
- Russian Olive
- Thornless Honey Locust
- Washington Hawthorn

PL - PARK OR LAWN TREES

- American Aborvitae
- American Sweet Bum

- Austrian Pine
- Bradford Pear
- Canadian Hemlock
- Christine Buisman Elm
- Cockspur Hawthorn
- Colorado Blue Spruce
- European Beech
- European Mountain Ash
- Flowering Dogwood
- Ginkgo
- Goldenrain Tree
- Hop Hornbeam
- Japanese Maple
- Japanese Pagoda Tree
- Marshall Seedless Ash
- Norway Maple
- Pin Oak
- Purple Leaf Plum
- Pyramidal European Hornbeam
- Scotch Pine
- Sugar Maple
- Thornless Honey Locust
- White Fir
- White Spruce

DS - DECIDUOUS SCREENING PLANTS

- Amur Maple
- Autumn Olive
- Bayberry
- Border Forsythia
- Burning Bush Euonymus
- Cockspur Hawthorn
- Common Lilac
- Flowering Quince
- Hedge Maple
- Japanese Barberry
- Mock Orange
- Regal Privet
- Russian Olive
- Scarlet Firethorn
- Siberian Dogwood
- Tallhedge (Columnar Buckthorn)
- Tartarian Honeysuckle
- Washington Hawthorn

ES - EVERGREEN SCREENING PLANTS

- American Arborvitae
- Chinese Juniper

- Canadian Hemlock
- Red Cedar
- Upright Japanese Yew

F - FOUNDATION SHRUBS AND ORNAMENTALS

- Andromeda
- Azalea
- Barberry, Japanese
- Burning Bush Euonymus
- Euonymus
- Flowering Quince
- Forsythia
- Holly
- Mock Orange
- Mountain La
- Rhododendron
- Scarlet Firethorn
- Siberian Dogwood
- Yews

The choice of ornamentals available is great, and personal taste usually is the deciding factor in selections. This is a small selection of the many fine ornamentals available. For information on plants that are not listed, contact the Broome County Cooperative Extension or a local nursery.

G – GROUND COVERS

- Baltic Ivy
- Crownvetch
- Pachysandra
- Periwinkle (Myrtle)

NR – SPECIES NOT RECOMMENDED

- Box Elder
- Cigar Tree (Catalpa Bignonoides)
- Green Ash
- Honey Locust (species type)
- Lombardy Poplar
- Mugho Pine
- Multiflora Rose
- Silver Maple
- Sycamore (Buttonwood Tree)
- Tree Willows (all types)
- White Birches

The descriptions of all plant types are listed in alphabetical order. If a plant in which the reader is interested is not found in this planting guide, information may be obtained from local nurseries or the Broome County Cooperative Extension.

American Arborvitae (*Thuja occidentalis*) – ES, PL

<http://plants.usda.gov/java/profile?symbol=THOC2>

The American Arborvitae grows to 60 feet in a neat, narrow pyramidal form. It is evergreen but is subject to winter browning in unprotected areas. It has a soft, flat needled foliage and is fast growing. It does not tolerate dry conditions well, preferring moist but well drained areas. The Arborvitae can be grown in both full sun and partial shade conditions. It tolerates shearing. The shrub may have problems with Arborvitae leaf miner and Juniper twig blight.

American Sweetgum (*Liquidambar styraciflua*) – PL

<http://plants.usda.gov/java/profile?symbol=LIST2>

The American Sweet Gum is a fast growing tree that reaches a mature height of over 100 feet. This tree will do well in areas of wet soil and poor drainage and is resistant to insect and disease problems. Because of its large size, it should be planted only where it will not become a problem.

Amur Maple (*Acer ginnala*) – C, DS

<http://plants.usda.gov/java/profile?symbol=ACGI>

The Amur Maple is a dense, low tree that grows to a height of 20 feet. It is one of the hardiest maples and can be used for container and screening plantings. It does well in both full sun and partial shade and requires a well-drained soil. It has good tolerance to road salt and excellent resistance to both disease and insect problems. Not readily available.

Andromeda (*Pieris floribunda*) – F

<http://plants.usda.gov/java/profile?symbol=PIFL>

The Andromeda is a shrub with dark green foliage and clusters of white flowers in the spring. It is a good foundation shrub and may be sheared. It is sometimes attacked by Andromeda lace bug.

Austrian Pine (*Pinus nigra*) – PL

<http://plants.usda.gov/java/profile?symbol=PINI>

The Austrian Pine grows at a moderate rate to a mature height of 60 feet. It prefers an acid soil. The tree is hardy in this area and resists drought. It has good road salt tolerance and does well in both wet soil and somewhat limited root space. The Austrian Pine tolerates air pollution and has good insect and disease resistance. It has some problems with the White Pine Weevil in this area.

Autumn Olive (*Elaeagnus umbellata*) – DS

<http://plants.usda.gov/java/profile?symbol=ELUMP>

The Autumn Olive is a shrub that reaches a height of 10-15 feet. It is valued for attracting wildlife, as birds readily eat the red berries. The foliage is silvery when young, and the flowers are yellow and fragrant.

Azalea (*Rhododendron*) – F

<http://plants.usda.gov/java/profile?symbol=RHPE4>

The Azaleas belong to the same genus as the Rhododendron and require the same growing conditions of moist, acid soil. It is a beautiful, showy plant when in bloom, with yellow, orange, pink, or scarlet flowers. It may need some winter protection.

Baltic Ivy (*Hedera baltica*) – G

http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/groundcover/hedera_helix.html

Baltic Ivy does best in shade, on the north or west side of a building. It stays green the year round and grows in areas that may be too shady for grass. Baltic Ivy spreads rapidly and is a good bank cover.

Bayberry (*Myrica pensylvanica*) – DS

http://plants.usda.gov/factsheet/pdf/fs_mope6.pdf

The Bayberry is a hardy screening shrub that reaches an unshered height of nine feet. It prefers a planting site in full sun and does well in average soil. In some sheltered areas, it may keep its leaves through most of the winter.

Border Forsythia (*Forsythia intermedia*) – DS, F

<http://plants.usda.gov/java/profile?symbol=FOIN3>

This Forsythia reached an untrimmed height of 6 – 12 feet and is best known for its blaze of yellow flowers in April. It forms an arching, upright shrub if left untrimmed but takes readily to shearing. The best flowers are produced in full sun plantings. Two hardy cultivators are “Lynwood Gold” and “Sunrise.”

Box Elder (*Acer negundo*) – NR

<http://plants.usda.gov/java/profile?symbol=ACNE2>

The Box Elder, also known as the Ash-leaved Maple, is weak-wooded with a very poor growing form, giving it a bad appearance. It is a short-lived tree that should not be cultivated.

Bradford Pear (*Pyrus calleryana* “Bradford”) – SU, PL

<http://plants.usda.gov/java/profile?symbol=PYCA80>

The Bradford Pear reaches a height of 40 feet at maturity. It produces small white flowers in the spring and small fruit. It is hardy, with excellent drought, insect and disease resistance. The tree also shows good road salt and air pollution tolerance. It can be grown in areas with somewhat limited root space and can tolerate moderately wet soil. Its qualities make it an excellent tree where it has room to grow. It loses its leaves very late and has rich burgundy fall color, adding to its beauty.

Burning Bush *Euonymus alatus*) – DS, F

<http://plants.usda.gov/java/profile?symbol=EUAL13>

The Burning Bush reaches an untrimmed height of 8-15 feet and is best known for its bright scarlet autumn color. The best foliage is produced in full sun plantings. The small scarlet berries produced by the shrub are a favorite food for wild birds. The shrub is hardy under a wide range of weather conditions.

Canadian Hemlock (*Tsuga canadensis*) – ES, PL

<http://plants.usda.gov/java/profile?symbol=TSCA>

The Canadian Hemlock is a slow growing evergreen that reaches a mature height of 90 feet. It prefers a moist but well-drained soil. The Hemlock has excellent disease and insect resistance. It can be sheared to form a hedge or left to grow as a specimen in its natural pyramidal form. It does not tolerate dry or city conditions and should not be planted close to buildings or in compacted soils. It is very hardy when given the proper growing conditions.

Catalpa bignonioides – NR

http://plants.usda.gov/factsheet/pdf/fs_casp8.pdf

The Catalpa, locally called the Indian Cigar Tree, produces a large crop of foot long seedpods every year, making it a litter problem. It is fast growing but weak wooded and, therefore, not a tree recommended for planting.

Chinese Juniper (*Juniperus chinensis*) – ES

<http://plants.usda.gov/java/profile?symbol=JUCH4>

The Chinese Juniper is variable in height, depending on the cultivar. The evergreen prefers a dry, poor soil and does best in a sunny location. The Chinese Juniper may be a carrier of the Cedar Apple Rust Disease and should not be planted near apple trees, but this is not a major problem in this area.

Christine Buisman Elm (*Ulmus carpinifolia* “Christine Buisman”) – SU, PL

<http://plants.usda.gov/java/profile?symbol=ULPR>

The Christine Buisman Elm reaches a mature height of 60 feet, with a width of 45 feet. It is hardy and is tolerant of drought conditions. It does well in areas of compacted soil and withstands somewhat poorly drained soil conditions. The Christine Buisman Elm has few problems with either insects or diseases.

Cockspur Hawthorn (*Crataegus crus-galli*) – SH, C, DS, PL

<http://plants.usda.gov/java/profile?symbol=CRCR2>

The Cockspur Hawthorn reaches a height of 25 feet at maturity. It is a very versatile tree that can be used as a street tree, a container tree or as a screening. It tolerates crowded roots and is somewhat drought resistant. The Cockspur Hawthorn has few insect problems and is recommended where leaf spot is a problem, as it is resistant to the disease.

Colorado Blue Spruce (*Picea pungens*) – PL

<http://plants.usda.gov/java/profile?symbol=piPu>

The Blue Spruce grows slowly to a height of 100 feet. Its foliage ranges in color from dark green to a definite bluish cast. The Blue Spruce must have full sun for good performance. It is tolerant of road salt but may have some problems with insects, mainly spruce gall aphids and mites. To avoid insect problems, do not plant in hot, dry areas. It is also susceptible to spruce canker in this area. When the Colorado Blue Spruce is past its prime, it has a tendency to lose its lower branches.

Common Lilac (*Syringa vulgaris*) – DS

<http://plants.usda.gov/java/profile?symbol=SYVU>

This frequently seen shrub reaches a height of 10 - 20 feet, is upright in its growth habit and dense growing. It suckers easily (new spreading growth from the roots), which may be a problem if a narrow hedge is desired. It is very hardy and has fragrant flowers in mid-May. It grows well in both full sun and partial shade.

Crabapple (*Malus species*) – SH, C, PL

<http://plants.usda.gov/java/profile?symbol=MAFL11>

There are many varieties of crabapple trees that do well in this area, such as the Hopa (*Malus* “Hopa”) and Radiant (*Malus* “Radiant”). Crabapples are very hardy and able to

withstand somewhat compacted root space. They have good insect resistance but, in the autumn, the fruit may attract some pests. Crabapples vary in their blossom color and fruit size, and individual taste should determine which variety is planted.

Crownvetch (*Coronilla varia*) – G

<http://plants.usda.gov/java/profile?symbol=SEVA4>

Crownvetch grows 12 - 18 inches tall and thrives on banks and slopes almost anywhere. It is resistant to drought, disease and insects once it is established. Crownvetch is noted for doing well in very poor soils. The pink flowers of Crownvetch last from June until frost. Many banks along local highways have been planted with Crownvetch.

Euonymus (*Euonymus*) – F

<http://plants.usda.gov/java/profile?symbol=EUAT5>

There are many varieties of Euonymus available, ranging in size from very tall to dwarf. It is either deciduous or semi-evergreen, depending on the protection given to the planting area. All euonymus can be planted in either full sun or partial shade. Some species have a low tolerance to road salt.

European Beech (*Fagus sylvatica*) – PL

<http://plants.usda.gov/java/profile?symbol=FASY>

The European Beech reaches a height of 90 feet, has smooth gray bark and good foliage. It should be used in very large growing areas. The shade from the European Beech is heavy enough to cause problems with grass growing beneath it. The tree transplants easily.

European Mountain Ash (*Sorbus aucuparia*) – SU, PL

<http://plants.usda.gov/java/profile?symbol=SOAU>

The European Mountain Ash reaches a height of 40 - 50 feet, has bright green foliage and produces large clusters of white flowers in June as well as bright red berries in late summer. There is a columnar form available (*Sorbus aucuparia fastigiata*), which has a mature width of only 12 feet and is useful for street plantings.

Flowering Dogwood (*Cornus florida*) – C, PL

<http://plants.usda.gov/java/profile?symbol=COFL2>

A Flowering Dogwood reaches a mature height of 20 – 40 feet and is best noted for its large, beautiful flowers. It needs extra water during rain shortage. The tree may have canker problem and some trouble with insects in this area. Given the proper care and growing conditions, the Flowering Dogwood can be worth its trouble.

Flowering Quince (*Chaenomeles speciosa*) – DS

<http://plants.usda.gov/java/profile?symbol=CHSP12>

The Flowering Quince is a good hedge plant which shears well and reaches an untrimmed height of 6 – 10 feet. Its main attraction is its beautiful flowers in early May, which range from scarlet red to pink and white. It has an apple like, edible fruit. The Flowering Quince does well in both full sun and partial shade. Like many hedge shrubs, the Flowering Quince also looks quite good as a specimen plant.

Ginkgo (*Ginkgo biloba*) – SU, PL

<http://plants.usda.gov/java/profile?symbol=GIBI2>

A fast growing tree that reaches 50 – 100 feet, the Ginkgo is very hardy, with good drought and road salt tolerance. It is also very resistant to air pollution, insect problems, and disease, making it a good city tree. Only the male Ginkgo should be planted because the fruit of the female tree is very disagreeable when it decays.

Goldenrain Tree (*Koelreuteria paniculata*) – SH, C, PL

<http://plants.usda.gov/java/profile?symbol=KOPA>

The Goldenrain Tree reaches a height of 20 – 30 feet. An excellent city tree with attractive yellow flowers, it is fast growing in a large range of soils. The Goldenrain Tree grows well on city streets on in containers as its roots withstand compacted soil. Its other qualities include tolerating drought and a high resistance to road salt, insects, and diseases.

Green Ash (*Fraxinus pennsylvanica*) – NR

<http://plants.usda.gov/java/profile?symbol=FRPE>

The Green Ash produces a large crop of seedpods in the fall, making it a maintenance problem. The Marshall Seedless Ash makes an excellent substitute.

Hedge Maple (*Acer campestre*) – SH, SW, C, DS

<http://plants.usda.gov/java/profile?symbol=ACCA5>

The Hedge Maple reaches a height of 15- 25 feet with a spread of 10 – 15 feet. It does very well in city conditions and is very tolerant of poor soil and road salt. It is very hardy and can grow in areas that offer limited root space, such as containers and medians between streets and sidewalks. The Hedge Maple has few problems with insects or diseases. It is a very useful tree that should command attention.

Hicks Yew (*Taxus media* “*Hicksii*”) – ES, F

<http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=F870>

The evergreen Hicks Yew matures at a height of 8 – 10 feet. It has an upright habit and forms several stems at the base, giving it a dense appearance. The foliage is dark green, and the shrub bears red berries in the Fall. The Hicks Yew may be sheared to any height. It is sensitive to road salt, making it a poor choice in areas where road salt is used.

Holly (*Ilex opaca*) – F

<http://plants.usda.gov/java/profile?symbol=ILOP>

The American Holly is a broadleaf evergreen with shiny green foliage and bright red berries. Only hardy varieties should be planted, and winter protection should be given until the plant is well established.

Honey Locust (*Gleditsia triacanthos*) – NR

<http://plants.usda.gov/java/profile?symbol=GLTR>

The Honey Locust has large thorns and produces numerous large brown seedpods that pose a maintenance problem. A number of thornless, seedless varieties of Thornless Honey Locust make good substitutions.

Hophornbeam (*Ostrya virginiana*) – SU, C, PL

<http://plants.usda.gov/java/profile?symbol=OSVI>

The Hophornbeam, also called the Ironwood Tree, reaches a mature height of over 60 feet. Its crown has a pyramidal shape with thick leaves. It is a slow growing tree that is resistant to

insect and disease problems. It is very hardy and shows good tolerance to road salt. It shows very good ability to withstand compacted soil and may be used in containers. Because of its slow growth, its height does not become a problem too rapidly.

Japanese Barberry (*Berberis thunbergii*) – DS, F

<http://plants.usda.gov/java/profile?symbol=BETH>

Several varieties of Japanese Barberry can reach a height of 6 – 8 feet, making it an excellent screening plant. It is extremely hardy and resistant to drought and hot planting areas. The Japanese Barberry is deciduous, with scarlet autumn color. The bright red berries last through most of the winter. The barberry does well in both full sun and partial shade and comes in many varieties, including dwarf and red-leaved.

Japanese Maple (*Acer palmatum*) – SH, C, PL

<http://plants.usda.gov/java/profile?symbol=ACPA2>

A low, red-leaved, showy maple that reaches a height of 20 feet, the Japanese Maple is tolerant of pollutants and road salt but may be sensitive to some pesticides. The Japanese Maple requires good soil and does well in both full sun and partial shade. It tolerates compacted soil and may be used in containers. Its broad, bushy appearance should be taken into consideration when planting near streets.

Japanese Pagoda Tree (*Sophora japonica*) – SU, C, PL

<http://plants.usda.gov/java/profile?symbol=STJA9>

The height of the Japanese Padoga Tree reaches 40 – 65 feet, with a width of 30 feet. Although the tree is sensitive to soil that is wet or has poor drainage, it shows good resistance to air pollution, insect problems and disease. The tree produces flowers in late summer. The cultivar “Pendula” is the best variety to use in containers.

Little Leaf Linden (*Tilia cordata*) – SU, C, PL

<http://plants.usda.gov/java/profile?symbol=TICO2>

The Little Leaf Linden reaches a height of 50 feet. It produces flowers in the spring. It is hardy and shows good resistance to drought, road salt, wet soils, and air pollution. This tree is often attacked by Japanese beetles and may be defoliated where they are a problem. It shows very good resistance to disease in this area.

Lombardy Poplar (*Populus nigra*) NR

<http://plants.usda.gov/java/profile?symbol=PONI>

The Lombardy Poplar is a weak wooded tree and susceptible to a fatal canker disease when it reaches maturity. Many other screening plants make better choices. (See screening plants list.)

Marshall Seedless Green Ash (*Fraxinus pennsylvanica* “Marshall”) – SU, PL

<http://plants.usda.gov/java/profile?symbol=FRPE>

The Marshall Seedless Green Ash reaches a height of 50 to 60 feet and is relatively fast growing. It is hardy and drought resistant. The tree shows good tolerance to insects, diseases, and road salt. Its seedless quality eliminates the maintenance problem of other green and white ashes.

Mock Orange (*Philadelphus coronarius*) – DS, F

<http://plants.usda.gov/java/profile?symbol=PHCO7>

The Mock Orange is a shrub that reaches a height of 8 – 12 feet and is especially good in dry areas. It grows well in both full sun and partial shade. It bears fragrant flowers in June and has no fruit. The Mock Orange has a very upright habit.

Mountain Laurel (*Kalmia latifolia*) – F

<http://plants.usda.gov/java/profile?symbol=KALA>

The Mountain Laurel a broad leaf evergreen that reaches a height of 6 –12 feet. It is commonly planted as a foundation shrub or in a naturalistic setting. It commonly has white or pink flowers. The Mountain Laurel is protected by law and must be obtained through nurseries, not gathered.

Mugho Pine (*Pinus mugo*) – NR

<http://plants.usda.gov/java/profile?symbol=PIMU80>

The Mugho Pine is highly susceptible to Pine Needle Scale in this area and should be avoided if a substitute plant can be selected.

Multiflora Rose (*Rosa multiflora*) NR

<http://plants.usda.gov/java/profile?symbol=ROMU>

At one time promoted as a living fence, the multiflora rose spreads uncontrollably from its intended growing site.

Norway Maple (*Acer platanoides*) – SU, PL

<http://plants.usda.gov/java/profile?symbol=ACPL>

The Norway Maple reaches a height of 35 – 45 feet, with a crown width of 35 – 50 feet. The tree has shallow roots and, therefore, should not be planted near sidewalks. The Norway Maple has shown problems with a condition called “girdling root” in which one root encircles the rest of the roots and causes stress to the tree. The Norway Maple is hardy in this area and has good resistance to insects and disease. Some of the cultivars that are available locally are “Crimson King” (red foliage), “Summer Shade” and “Schwedler.”

Norway Spruce (*Picea abies*) – PL

<http://plants.usda.gov/java/profile?symbol=PIAB>

The Norway Spruce can reach a height of 150 feet at maturity and should be given a planting site that will accommodate its eventual height. It is very hardy and can still thrive during periods of drought. The Norway Spruce requires full sun and well-drained soil. It is fairly resistant to insect and disease problems but may be troubled by spruce gall aphids. Contact the Cooperative Extension for control methods.

Pachysandra (*Pachysandra terminalis*) – G

<http://plants.usda.gov/java/profile?symbol=PATE11>

Pachysandra is an easy to grown ground cover that reaches a height of only 6 – 8 inches in partial and even dense shade. This makes it an appropriate ground cover to put under evergreens or along foundations. It has small spikes of white flowers in the spring and spreads rapidly. It forms the thickest cover when planted in moist soil.

Periwinkle (*Vinca minor*) – G

<http://plants.usda.gov/java/profile?symbol=VIMI2>

Periwinkle grows to a height of only five inches, thrives in both sun and shade and keeps its green leaves through most of the year. It spreads slowly and may be used on banks and slopes to bind soil. In early summer, Periwinkle has bright blue flowers.

Pin Oak (*Quercus palustris*) – SU, PL

<http://plants.usda.gov/java/profile?symbol=QUPA2>

The height of the mature Pin Oak reaches up to 75 feet. The Pin Oak is pyramidal in shape. It produces a large crop of acorns in the fall. The Pine Oak requires an acid soil that is also rich in iron. It is a hardy tree with good resistance to road salt, insects, disease and air pollution. It has pretty copper colored autumn foliage and holds its leaves well into the winter, providing wildlife cover. The Pin Oak is susceptible of many forms of gall, but this alone should not discourage planting.

Purple Leaf Plum (*Prunus cerasifera*) – SH, SW, C, PL

<http://plants.usda.gov/java/profile?symbol=PRCE2>

The Purple Leaf Plum (a.k.a. Cherry Plum) has an upright habit, reaching a height of 12 – 15 feet, with a width of 8 – 10 feet. Its foliage is purple, and it produces small pink flowers in the spring. The Purple Leaf Plum is a good choice for planting in containers because of its small size. It is also a very pretty accent tree.

European Hornbeam (*Carpinus betulus*) – SW

<http://plants.usda.gov/java/profile?symbol=CABE8>

The European Hornbeam reaches a height of 35 feet with a width of 15 feet, making it suitable for narrow planting area. It is very hardy and shows good resistance to drought, wet soil, and road salt. It grows well in areas of limited root space and has good resistance to insects, disease, and air pollution.

Red Cedar (*Juniperus virginiana*) – ES, PL

<http://plants.usda.gov/java/profile?symbol=JUVIV>

The Red Cedar grows to a height of 50 – 75 feet at a moderate rate. It is evergreen with a narrow pyramidal form and requires full sun planting sites. The Red Cedar has no major insect problems but should not be planted near apple trees since it can be an alternate host for Cedar-Apple Rust Disease.

Red Oak (*Quercus rubra*) – SU, PL

<http://plants.usda.gov/java/profile?symbol=QURU>

The Red Oak grows to a height of 60 – 80 feet and prefers an acid soil. It is a fairly fast growing tree with an attractive crown and produces an abundance of acorns. The Red Oak is very hardy in this area, with good resistance to road salt, air pollution, and insects. The tree requires good root space and well-drained areas. It has been shown to be fairly disease resistant.

Regal Privet (*Ligustrum obtusifolium regelianum*) – DS

http://www.backyardgardener.com/plantname/pda_4249.html

The Regal Privet is a hedge plant that grows to 4 – 6 feet and is easily sheared to other heights. It has white flowers in June and blue-black berries in late summer. The Regal Privet does well in either full sun or partial shade.

Rhododendron (*Rhododendron*) – F

<http://plants.usda.gov/java/profile?symbol=RHODO>

The Catawba Rhododendron and its hybrids are among the most popular forms that are grown. All Rhododendrons can be grown in full sun and partial shade, preferring an acid soil. There are many varieties of Rhododendron varying in size and flower color. Rhododendrons are considered broad-leafed evergreens and may require some winter protection until well established.

Russian Olive (*Elaeagnus angustifolia*) – C, DS

<http://plants.usda.gov/java/profile?symbol=ELAN>

An unusual shrub that reaches a mature height of over 20 feet, the Russian Olive may also take the form of a small tree. It tolerates a wide range of soil conditions and is very hardy in this area. The Russian Olive resists road salt, insects, and disease. It tolerates growing areas with limited root space, making it a good choice for container planting.

Scarlet Firethorn (*Pyracantha coccinea*) – DS

<http://plants.usda.gov/java/profile?symbol=PYCO2>

The Scarlet Firethorn reaches a height of 8 – 15 feet but is easily pruned to any desired shape. Two cultivars that are hardy in this area are “Lalandii” and “Kason.” This shrub does well in both full sun and partial shade, producing large clusters of white flowers in June. During fall and winter months, the Scarlet Firethorn is covered with bright red berries. (Kason produces orange berries.)

Scots Pine (*Pinus sylvestris*) – PL

<http://plants.usda.gov/java/profile?symbol=PISY>

The Scots (a.k.a. Scotch) Pine is a pretty evergreen that matures at a height of 75 feet, has excellent cold and drought resistance and fair insect and disease resistance. It is sometimes affected by “pine needle scale” and does not do well when exposed to road salt. The Scotch Pine is fairly tolerant of both compacted root space and wet soil. It is valued as a Christmas tree in this area.

Sentry Ginkgo (*Ginkgo biloba fastigiata*) – SW

<http://hort.ufl.edu/trees/GINBILD.pdf>

The Sentry Ginkgo is a columnar form of Ginkgo that can be used in spaces needed a narrow tree. Use only male trees; female trees produce a foul smelling fruit. (See description under Ginkgo.)

Siberian Dogwood (*Cornus alba sibirica*) – DS

<http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?Code=B837>

This Dogwood grows to a height of nine feet if left unshaped. It produces either white or yellow flowers in early summer. The shrub does well in both full sun and partial shade. In winter months, the bright red stems of the Dogwood add interest to the landscape.

Silver Maple (*Acer saccharinum*) – NR

<http://plants.usda.gov/java/profile?symbol=ACSA2>

The Silver Maple is weak wooded and prone to ice and storm damage. Good substitutes can be found in the list of lawn trees.

Sugar Maple (*Acer saccharum*) – PL

<http://plants.usda.gov/java/profile?symbol=ACSA3>

The mature Sugar Maple reaches a height of over 100 feet and is very hardy. It is not recommended as a street tree because it does not tolerate road salt and other stresses of a roadway. Many adult Sugar Maples lining streets in the Town of Union show signs of “maple decline,” which is characterized by undersized leaves in the summer and premature leaf coloring in the fall. There is little which can be done for these trees. Maple decline can also be caused by planting trees too close to buildings or by grade changes around their roots. For these reasons, the tree should be planted only in areas of fertile soil, away from buildings and streets. In these planting sites, this beautiful native tree provides cooling summer shade and brilliant fall color.

Sycamore or Buttonwood (*Platanus occidentalis*) – NR

<http://plants.usda.gov/java/profile?symbol=PLOC>

The Sycamore tree should not be planted in this area because it is extremely susceptible to a disease called anthracnose.

Tallhedge (*Rhamnus frangula*) – DS

<http://plants.usda.gov/java/profile?symbol=FRAL4>

The Tallhedge, also called Columnar Buckthorn, is a vigorous shrub that reaches an unsharped height of 15 – 20 feet, but may be trimmed to lower heights. It has white flowers in the summer, followed by red berries that are favored by many types of birds. The Tallhedge produces a showy autumn color.

Tartarian Honeysuckle (*Lonicera tatarica*) – DS

<http://plants.usda.gov/java/profile?symbol=LOTA>

This hardy honeysuckle reaches a height of 8 – 12 feet, has controlled growth and thrives under a wide variety of soil, climate and growing conditions. It has little problem with insects or disease and does well in direct sun or partial shade. The honeysuckle has fragrant pink flowers in mid-May followed by red berries in August, which are a favorite food of birds.

Thornless Honey Locust (*Gleditsia triacanthos inermis*) – SU, PL, C

<http://hort.ufl.edu/trees/GLETRIA.pdf>

The Thornless Honey Locust reaches a height of 55 – 60 feet, with a spread of 35 – 45 feet. It is not heavily crowned, letting sunlight filter through its leaves to the ground. It tolerates city conditions, drought and does well in many types of soil. The Thornless Honey Locust may have problems with some types of insects. It tolerates crowded root conditions fairly well, making it a good container tree. The tree has a high tolerance of road salt. Common cultivars are “Shademaster,” “Skyline” and “Sunburst.”

Tree Willows (*Salix species*) – NR

<http://plants.usda.gov/java/profile?symbol=SALIX>

Willow trees, including Weeping Willow and Green Willow, are weak wooded and shallow rooted, making them prone to storm damage and uprooting. They tolerate very wet soil and, if used at all, should be planted in wet areas clear of all buildings.

Upright Japanese Yew (*Taxus cuspidata*) – ES, P

<http://plants.usda.gov/java/profile?symbol=TACU>

The Japanese Yew has many cultivars, and the mature height varies with the variety. It is evergreen and produces red berries in the fall. All yews need a well-drained soil that is not too acid and do well in both full sun and partial shade. They are sensitive to being planted too deeply, so care should be given to place them no deeper than originally planted.

Washington Hawthorn (*Crataegus phaenopyrum*) – SH, C, DS

<http://plants.usda.gov/java/profile?symbol=CRPH>

The Washington Hawthorn reaches a mature height of 15 – 25 feet. It is broadly columnar and densely branched. The tree tolerates pollution and is very hardy in this area. The Washington Hawthorn is fairly tolerant of road salt.

White Birch (*Betula populifolia*) – NR

<http://plants.usda.gov/java/profile?symbol=BEPO>

Both the bronze birch borer and the birch leaf minor attack the white birch trees in this area and, if planted, they will require a maintenance program to control the insects.

White Fir (*Abies concolor*) – PL

<http://plants.usda.gov/java/profile?symbol=ABCO>

The White Fir reaches a height of over 100 feet at maturity. It has a nice pyramidal habit but needs space to accommodate its size. The White Fir withstands city conditions and tolerates heat and drought well. It does not do well in wet areas, preferring well-drained soil.

White Pine (*Pinus strobus*) – NR

<http://plants.usda.gov/java/profile?symbol=PIST>

The White Pine has problems with the white pine weevil and is attacked by white pine blister rust in this area. It is also very sensitive to road salt.

White Spruce (*Picea glauca*) – PL

<http://plants.usda.gov/java/profile?symbol=PIGL>

The White Spruce grows slowly to a height of 70 feet. It prefers full sun planting situations, shows good salt resistance and is tolerant of city conditions. The White Spruce may be prone to several types of insects as well as spruce canker in this area.

REFERENCES

1. Bartow, W. Donald II, Gerhold, Henry and Sacksteder, Christopher J., "Selecting and Growing Better Landscape Trees for the Northeastern United States," Pennsylvania State University Publication, Bulletin 829, College of Agriculture, July 30, 1979.
2. Carpenter, E. D., Trees and Shrubs for Connecticut, Cooperative Extension Service, College of Agriculture and Natural Resources, University of Connecticut.
3. Naturalists Club of Broome County, Inc., Trees of Broome County, Broome County Department of Parks and Recreation, 1970.
4. New York State Electric and Gas Corporation, Trees in Your Community, A Handbook of Selected Trees in New York.

5. United States Department of Agriculture, Home and Garden Bulletin Number 192, United States Government Printing Office, Washington, D.C., revised June 1977.
6. United States Department of Agriculture, Soil Conservation Service, in cooperation with Cornell University Agricultural Experimentation Station, Soil Survey: Broome County, New York, United States Government Printing Office, Washington, D.C., 1977.
7. Viertel, Arthur T., Professor of Landscape Architecture, Recipe for Trees Planting From Syracuse University.