



NYC Parks

Native Species Planting Guide for New York City

2nd Edition

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Mitchell J. Silver, FAICP
Commissioner

**City of New York
Parks & Recreation**

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Dear Parkies and Plant Lovers:

Cities are filled with people and New York City is getting ever more populated, with an estimated additional million residents expected in the next 20 years. No city of this size—a metropolis—can survive and prosper without robust green spaces helping to clean our air and water, cool temperatures, mitigate flooding and storm surges, and provide sanctuary from the pace of urban life.

New York City's 10,000 acres of natural areas—forests, wetlands, and grasslands—are our working lungs and resilient coastlines. The healthier these ecosystems, the healthier we are. Native plants and animals are the building blocks of biodiversity, which mark the health of ecosystems, and Local Law 11 has memorialized the preservation and increase of native plants to ensure that our wild spaces are as rich as possible.

New York City's unique biodiversity stems largely from the fact that we sit at the juncture of New England and the Mid-Atlantic, the Atlantic Ocean and the Hudson River, and two essential East Coast flyways. It is home to an incredible array of ecosystems that when thriving in their native homes create for complex biodiversity that benefits us all.

Parks' Natural Resources Group (NRG) is the oldest urban conservation division in the nation. Since 1984, NRG has been a pioneer in protecting natural areas and in 2008 it established the Forever Wild program as a way to preserve our most special natural habitats. The Greenbelt Native Plant Center has been growing native plants for use in ecological restoration projects for nearly two decades. In 2012, The Natural Areas Conservancy was started to advance Parks' conservation efforts. In compliance with Local Law 11, I present to you the 2nd Edition of the Native Species Planting Guide. This guide lists all the native plants of the City and their specific characteristics. If you are planting in a natural area as defined by this guide you must use the plants cataloged here. If you are planting outside these areas, please do your best to incorporate natives into your sustainable designs—but do not ever use any invasive species, a list of which is provided in this guide as well.

New York City, like our sister East Coast cities, faces the uncertainty of climate change. Superstorm Sandy made this real for all of us as it tore through neighborhoods, felling approximately 20,000 trees, and doing untold damage to both the built environment and our natural spaces. Intact and functioning ecosystems mitigate these threats. Local Law 11 ensures that we preserve our natural history for the sake of the future: healthy ecosystems will help us weather climate change by making us more resilient.

Happy planting!

Sincerely,

Mitchell J. Silver, FAICP

The Value of Native Plants

What is a 'Native' Plant? What is Biodiversity?

If one asks five different people “What is a native plant?”, one is likely to get five different answers. Defining “native” in geographic terms is complicated and not necessarily suited to protecting indigenous flora. Since the 1970s with the creation of the Federal Endangered Species Act, the United States has attempted to save native flora, with mixed success. The standard approach has been to use geographic or political boundaries to conserve native plants; for example: New York State Environmental Conservation Law Section 9-1503.

New York City's Local Laws 10 and 11 of 2013 represent an evolving approach to protect our native plants by focusing on biodiversity, rather than individual plant species, and reflects an increased understanding of plant conservation. A focus on biology is a better way to understand what is native and how best to protect native populations. Seen through this lens, the protection of native plants is linked with the protection and sustainability of ecosystems.

Biological diversity, or biodiversity, is the richness of species, both animal and plant, that occupy a given ecosystem. Taken out of the context of the ecosystem, biodiversity has little biological meaning. This is recognized both in the present law, and in the commonly accepted definition of native species from Federal Executive Order 13112: “.....‘**native species**’ shall mean, with respect to a particular ecosystem, a species that, other than as the result of introduction, historically occurred or currently occurs in that ecosystem.”

The more intact an ecosystem the more species richness there is, and the greater its resiliency - its ability to recover from the minor and major perturbations of weather, biological invasion, and other disturbances. As species and their assemblages are lost, the ecosystem begins to unravel, and the ability of the ecosystem to endure and recover from disturbance is lessened. Unmitigated, the systems collapse, and even if the ecosystems appear superficially unchanged, their functionality - their ability to deliver ecological services, whether carbon sequestration, food and shelter for wildlife, retention and cleaning of stormwater, or lowering of the heat island effect - is compromised.

Seeking to increase the biodiversity, and thus resiliency of an ecosystem, is the primary and most effective means of protecting native plants. Conversely, biodiversity cannot be increased by randomly planting additional species of plants or introducing new animals into the ecosystems. Ecosystems are groupings of species that have evolved over time, often millennia. As the eminent biologist E.O. Wilson states in his defense of biodiversity:

“...diversity, the property that makes resilience possible, is vulnerable to blows that are greater than natural perturbations. It can be eroded away fragment by fragment, and irreversibly so if the abnormal stress is unrelieved. This vulnerability stems from *life's composition as swarms of species of limited geographical distribution. Every habitat, from*

*Brazilian rain forest to Antarctic bay to thermal vent, harbors a unique combination of plants and animals. Each kind of plant and animal living there is linked in the food web to only a small part of the other species. Eliminate one species, and another increases in number to take its place. Eliminate a great many species, and the local ecosystem starts to decay visibly.” (Wilson, E.O., *The Diversity of Life*, 1985.) [Emphasis added]*

New York City Local laws 10 and 11 of 2013 serve the important purpose of requiring Parks to maximize its efforts to increase the biodiversity of functioning ecosystems in New York City. While planting native species outside of well-functioning ecosystems will not increase biodiversity it does not mean that those species cannot still provide habitat for bird, animal, and insect species as well as aesthetic value throughout the urban environment. Furthermore, it is the philosophy of Parks to enhance the proportion of native species throughout the built city when appropriate.

Natural New York

Understanding the current state of biodiversity in New York City’s ecosystems requires an understanding of the historical natural forces that shaped these ecosystems and the effect that development of the built city has had on these ecosystems. With this knowledge we can formulate the best plans to save and increase species richness in our surviving ecosystems.

New York City is a coastal city, at the edge of a continent, and at temperate latitudes. These geographic and climatic conditions have been uninterrupted for thousands of years and have yielded a landscape of primarily forested ecosystems which give way at the continent’s edge to coastal grasslands and salt marshes.

The last glacial ice age ended between ten to twenty thousand years ago. Before the retreat, however, glaciers had wiped clean the slate of local vegetation and forced plant species to retreat southward where they survived until the climate warmed. As the glaciers retreated and the climate warmed, plant species expanded their range northwards again, re-assembling into the ecosystems of the present day. We know that some species were still rebounding into modern times, expanding their ranges in an inexorable, slow, and methodical process.

The withdrawal of the glaciers left its physical mark on the future city as well. Chief among these events was the creation of ridges - terminal end moraines which formed high ground through portions of Queens, Brooklyn, and Staten Island. These moraines have characteristic soils that support specific ecosystems, remnants of which still exist in these boroughs. Similarly, to the east of these moraines, large glacial outwash plains formed, consisting to various degrees of gravels or sands, which also came to shape the natural city.

Climate has also played a significant role in shaping local plant populations. Many southern species find their present day northern limit here in New York City. Similarly, some species with

northern distributions find their southern limit here as well. In New York City there are many examples of species at the edges of their range.

New York City is a city of islands: Queens and Brooklyn (being the western extent of Long Island), Staten Island, and Manhattan (being virtually an island, although technically a peninsula). Only the Bronx is contiguous with the continental United States. Islands have a significant effect on biodiversity or species richness, both through physical isolation and by virtue of the island's size.

All of these factors, and more, have come together over evolutionary time to create the present day ecosystems that constitute New York City. However, development has left virtually all of these ecosystems as isolated remnants, far smaller than their original size. Utilizing *The Ecological Communities of New York State* by Carol Reschke, Parks' Greenbelt Native Plant Center (GNPC) staff has identified 28 natural ecosystems still distinguishable within New York City's borders. Many are fragmented and compromised, and only recognizable to trained botanists, but many others are intact.

Historical and Present Plant Surveys

New York City has always been a center of botanical exploration and expertise. Many of the 19th and 20th Century's leading botanists were either born or worked here and as a result we have detailed records of the species and overall numbers of species that once occurred here and good approximations of the present numbers. Many of these species were collected and preserved as dried specimens in herbaria at the New York Botanical Garden, Brooklyn Botanic Garden, and elsewhere. Based on these and other historic records we estimate that approximately 1,500 to 2,000 species likely occurred in the five boroughs of New York at the time of European colonization.

Since the early 1990s, the Brooklyn Botanic Garden, through its Metro Flora Project, has been systematically resurveying the flora of New York City and the surrounding region. Their work has revealed that there are approximately 750 species still present within our boundaries.

Utilizing historic and present day records it is possible to frame the question of what degree of biodiversity is still possible for the surviving ecosystems of our city. Does the current number represent a maximum or can we hope to manage our ecosystems better and possibly restore some of the lost species, thus increasing their biodiversity as the law instructs us to do?

What is Biodiversity? How Biodiverse Can New York City Hope to Be?

As stated previously, biological diversity, or biodiversity, is the richness of species, both animal and plant, that occupy a given ecosystem. To know what is possible we need to be aware of the theoretical boundaries to species diversity that have been established by scientists. Much of the science that reveals the extent of local biodiversity comes from studying islands.

A few key principals of island biogeography are important to consider understanding the level of biodiversity possible for New York, our 'City of Islands'. The degree of biological diversity is limited by the size of an island -- the larger the island, the more species diversity is possible. All things being equal, and with some species always being lost and new species being recruited, a dynamic equilibrium is obtained in which the overall number of species is constant for a given island of a given size.

By the 1970s the world was awakening to the dramatic loss of habitat. These losses have turned vast tracts of ecosystems into small isolated islands of vegetation. It wasn't very long before the theories of island biogeography were seen to be of practical use in designing and setting aside bioreserves. Questions were being raised as to the optimal size for a reserve to sustainably maintain its biodiversity prior to fragmentation and isolation.

There are parallels to the bioreserve questions that are relevant to the management and sustainability of urban ecosystems. New York City ecosystems have become severely fragmented, reduced in size and biologically isolated by the development of the city. The number of species that can be contained in most of our parks is severely limited, and we cannot increase the number of species and hence the biodiversity of our ecosystems simply by cramming more species into New York City's parkland, even if those species once occurred there. Many of the ecosystems within the 5 boroughs, with good management, can move towards a new, lower dynamic equilibrium reflective of their present reduced size and isolation.

There are many critical factors promoting biodiversity that can be exploited through proper and well funded management of New York City's parkland, such as control of invasive plants and insect pests, eliminating or at least minimizing and mitigating further fragmentation of our ecosystems, protecting hydrologic regimes, and supporting healthy plant populations through sound management practices. Critical to this last point is the management of the genetic health of these remnant plant populations. Without the ability to exchange their genes between large numbers of individuals within their local population and to receive and transmit occasional novel genes with outside populations, evolution cannot proceed and much like a handful of surviving tigers managed in zoos, we will be confined to practicing sophisticated horticulture in elaborate "native" gardens, rather than land management of functioning natural ecosystems.

Parks can work in concert to manage the genetic health of New York City's remnant ecosystems by instituting a program to increase plant population size by planting additional individuals into the population. These plants must be carefully sourced to protect the genetics of the remnant population. In addition, Parks can seek to exchange and reintroduce genes from neighboring, now isolated populations. If population size can be optimized, genetic diversity increased, and ecosystem health reversed, it may be possible to reintroduce lost species to our ecosystems with a reasonable expectation that they will integrate, survive, and sustain themselves.

To paraphrase E.O. Wilson, every species is dynamically linked to a handful of other species. No species can be reintroduced without considering the complex interactions it has with other species.

A Role for Our Native Species in the Built Environment

Planting native plants outside of New York City's natural ecosystems cannot contribute to the biodiversity of those ecosystems, and is therefore not required by this manual. Indeed, outside of the Forever Wild and natural areas identified in the next chapter, emphasis will be placed on increasing the proportion of native plants used in Park plantings. We can seek to restore or increase ecosystem health and attempt to restore and expand ecosystems on their edges, but there is no scientific proof that planting out into the built city will benefit adjoining ecosystems.

However, it does not mean that native species cannot serve an important role in infrastructure improvements. A good example is the current experiment between Columbia University and Parks to establish green roof plantings utilizing regionally native plant species. Two regional ecosystems, Hempstead Plains and Rocky Summit ecosystems, were chosen for this experiment because they closely mimicked the conditions encountered on rooftops -- hot, well drained, and drought-prone. The project is not seeking to create extensions of Hempstead Plains and Rocky Summit ecosystems onto the roofs of New York City; it is impossible to successfully transplant the totality of these ecosystems in all their biological complexity. Rather, the project sought to exploit existing knowledge of these species as they function in their natural ecosystems to create beauty and ecosystem services on rooftops.

Parks will continue to increase its use of native species in ornamental plantings designs and in right-of-way areas as appropriate. Native species have evolved to local environmental and edaphic conditions, and many have utilitarian and aesthetic qualities that can be of service to those responsible for designing and maintaining the public landscape as well as to individual property owners who seek to enhance their own backyards or street tree pits.

Parks is fortunate to have at its disposal a facility dedicated to the propagation and production of the flora of New York City's native ecosystems – Parks Greenbelt Native Plant Center. This facility exists primarily in support of efforts to conserve, manage and restore the City's ecosystems. Furthermore, it produces plants only from locally sourced, genetically rich plant populations, which contributes significantly to maintaining the genetic integrity of New York City's surviving ecosystems- a critical factor in maintaining biodiversity. Over the twenty years of its existence, GNPC has learned to grow roughly two thirds of the species still to be found in New York City's ecosystems.

The GNPC welcomes the opportunity to make these species both better known and more available to meet the challenges we collectively face to build a sustainable and resilient city. This guide will be an excellent tool in advancing these goals.

Introduced and Naturalized Plant Species

Plant introductions have been conducted since the earliest period of Western colonization and Native American populations introduced edible and useful plants from other regions along their trade routes. However, these introductions were made into agricultural systems, or were introduced as garden ornamentals. While some introductions have reproduced aggressively

and can be considered invasive, many others have adapted to local conditions and have naturalized. Ecosystems are not static, but evolving and as mentioned earlier, ecosystems lose and gain species through evolutionary time. The issue for biodiversity and sustainability of ecosystems arises from the degree to which introductions disrupt functioning ecosystems. To again quote E. O. Wilson: “Eliminate one species, and another increases in number to take its place. Eliminate a great many species, and the local ecosystem starts to decay visibly.”

Naturalized species perform valuable functions as ornamentals, provide habitat, shelter, and food for some bird, animal, and insect species. They have, however, decreased the overall diversity of the ecosystems they have colonized by displacing other species. Although they provide some ecological services, they will not function to the same degree as the species they displaced in intact ecosystems that have evolved over evolutionary time. In addition, if they have displaced specialist species that, for instance could only be pollinated by a particular bee species, then that loss will have cascaded through the ecosystem, with the potential loss of many other plant and animal species.

In highly disturbed sites, even within remnant ecosystems, introduced plants may prove better adapted to soil and hydrological conditions and this very well may merit their use, even though this is contrary to the goal of increasing the use of native plants in the city. Intelligent and informed planting design recognizes a number of complex characteristics that can't be confined to a narrow discussion of native vs. non-native origins.

Conclusion

Opportunities to increase biodiversity of New York City's existing ecosystems through planting practices will be carefully managed by New York City's land management professionals and landscape architects, and indeed we are now instructed to take concrete steps to do so. We can best meet this challenge by preserving the best of the remaining open space ecosystems that are as yet unprotected and through sound management and restoration of our surviving ecosystems.

Landscape architects and horticultural professionals exercise judgement in the specification of ornamental and native species to achieve a multitude of environmental and design goals. This guide, by presenting a selection of historically present native species, will further enhance the existing plant palette and serve to increase species diversity and the greater use of native species in various green spaces throughout the five boroughs.

“Biological diversity is the key to the maintenance of the world as we know it. Life in a local site struck down by a passing storm springs back quickly because enough diversity still exists.This is the assemblage of life that took a billion years to evolve. It has eaten the storms – folded them into its genes – and created the world that created us. It holds the world steady.” (Wilson, E.O., 1985)

How to Use This Guide

This manual is an information resource written to provide support for increasing biodiversity in our natural ecosystems. The guide contains detailed information for the tolerances, preferences, and value of over 430 native species. This information, where available, is intended to provide assistance in choosing the right plants to increase biodiversity in ecosystems, and to further aid in design for projects in these ecosystems. In addition to commercial nurseries, GNPC has plant material and seeds for the species listed in this guide and can be used as a resource on public projects. GNPC has an extensive propagation and growing operation for local native species and can be an valuable source of native plant material. The guide is organized by plant type to facilitate selection from a range of plant habits, from grasses to trees. It also consists of a bibliography of plants and planting design guides appropriate for use in the mid-Atlantic region and links to other helpful resources: lists of restricted and potentially invasive plants, guides to salt tolerances of a range of plants, a guide to plants best used for stormwater capture sites, and a list of plants appropriate for native landscape restoration, primarily in Forever Wild sites and natural areas identified within Parks' system. These lists provide suggestions for planting, and represent a near complete list of desirable or approved species. Specific site characteristics, the input of professionals, and other factors, will, as appropriate, dictate planting decisions. This information will be updated regularly, but it cannot substitute for the creative, innovative, careful, and conscious choices made by New York City's landscape architects, horticulturists, foresters, and other professionals.

Informed planting design involves a complex analysis and inventory of soils, hydrological conditions, light, and exposure. The consideration of existing plants on site may provide information on plant communities of native - and well adapted non-native - species best suited to a particular site. Many areas within the parks system, however, are extremely disturbed or degraded environments, and replication of native communities may not be the most effective means of establishing vegetative cover. Soils may be composed of highly alkaline building rubble, lack organic matter, or require remediation for various toxic substances before the establishment of new plantings. Most manufactured topsoils are neutral or alkaline pH and if they are introduced, this will also inform planting decisions. This guide provides information on especially urban-tolerant species that may be capable of thriving even in the toughest planting sites.

New Yorkers choosing plants for urban spaces are encouraged to learn about the way ecological communities establish and grow, so that designed plantings will have resiliency and ecological value, providing a full range of benefits to humans and other wildlife species. The ideal design intent is for every green space to support a sustainable, robust plant assemblage that gives value to the community.

Forever Wild and Natural Areas

Dozens of sites within our park system, totaling thousands of acres, have been identified as the most ecologically valuable lands within the five boroughs, and as priority areas for protection and conservation. These Forever Wild preserves, in combination with additional natural areas, are displayed in the tables and maps below. When designing a project in one of these preserves, the use of native plants is required. Planting outside these areas may include a broader palette of native, adapted, or non-invasive ornamental species. Specific boundaries of the preserves can be found on the individual park maps located at <http://www.nycgovparks.org/greening/nature-preserves/sites>. The intent of this guide is to promote the use of native plant material as appropriate to increase biodiversity in New York City's wild ecosystems.

Edges and Landscaped Areas

When working on edges of ecosystems, introduced species can have ecological value in addition to improving aesthetics or restoring historical plant palettes. As appropriate, non-native, non-invasive plants may be used, taking care that they do not spread into the nearby ecosystem. Historic and cultural landscapes listed on, or potentially eligible for, the National Register of Historic Places and designated as local landmarks by the City of New York Landmarks Commission may call for appropriate ornamental or historically present non-native species. At these sites, planting choices shall conform to the United States Secretary of the Interior's Standards for Historic Preservation. Many of these sites contain remnant or re-created cultivated and domestic landscapes with a variety of non-native species contributing considerably to their value as historic cultural resources. At these locations, landscape architects and natural resource professionals must determine appropriate boundaries and buffer zones between ecological preserves and historic landscapes. Where historic and cultural landscapes fall within Forever Wild sites or natural areas, they are excluded from the native species only planting mandate.

Stormwater and Green Infrastructure Areas

Local Law 10 of 2013 strongly encourages the New York City to maximize stormwater retentive plantings. Included in this guide is a list of relevant plants to use in stormwater capture sites. These sites have unique conditions that can be challenging for some native plants. Parks has spent the last three years researching and field testing these plants. The native plants that have performed well in these conditions are identified in the plant descriptions, and in a separate chapter.

Supporting Biodiversity

The stated purpose of the enacted native species law is to increase biodiversity within the five boroughs of New York City. Research tells us that planting native species in our intact

ecosystems – Forever Wild preserves and natural areas – will best support biodiversity. Though not required by the native biodiversity law, to the extent native plantings are used throughout New York City, they can improve overall habitat quality and resiliency. Curbside plantings and native plant gardens in landscaped areas can provide corridors for insects, birds, and other animals.

Increasing the use of native plants outside of intact ecosystems is an important value, and this guide aims to increase their prevalence in landscaped or non-natural settings. From a bird's eye view, New York City is a mosaic of green spaces, and even intermittent assemblages of native plant species can facilitate the movement of native pollinators and seed dispersers throughout our diverse landscape. Remnant nature in New York City is an irreplaceable element of our cultural heritage. Far from being merely of historic or archival interest, the increased use of native plants in appropriate settings creates a landscape vital to both contemporary and future New Yorkers.

NYC Parks with Forever Wild and Natural Areas

* These Parks contain portions that are Forever Wild sites. Many of these parks also contain portions of historic designed landscapes. Please refer to the How to Use this Guide section of this manual for detailed information.

Bronx

- 1 City Island Wetlands
- 2 Pelham Bay Park*
- 3 Givans Creek Woods
- 4 Seton Falls Park*
- 5 Pugsley Creek Park
- 6 Soundview Park
- 7 Bronx Park*
- 8 Van Cortlandt Park*
- 9 Riverdale Park*
- 10 Raoul Wallenberg Forest*
- 11 Spuyten Duyvil Shorefront Park
- 12 North Brother Island*
- 13 South Brother Island*

Manhattan

- 14 Inwood Hill Park*
- 15 Fort Washington Park
- 16 Fort Tryon Park
- 17 Sherman Creek Park
- 18 Riverside Park
- 19 Central Park*
- 20 Mill Rock Park*

Queens

- 21 Powell's Cove Park
- 22 Kissena Park
- 23 Kissena Corridor Park
- 24 Flushing Meadows Corona Park*
- 25 Forest Park*
- 26 Highland Park*
- 27 Spring Creek Preserve*
- 28 Udall's Cove Preserve*
- 29 Alley Pond Park*
- 30 Douglaston Park
- 31 Cunningham Park*
- 32 Grand Central Parkway*
- 33 Idlewild Park*
- 34 Brookville Park*
- 35 Public Place*
- 36 Hook Creek Wildlife Sanctuary*
- 37 Jamaica Bay Park
- 38 Seagirt Avenue Wetlands
- 39 Rockaway Beach and Boardwalk*
- 40 Dubos Point Preserve*
- 41 Brant Point Wildlife Sanctuary
- 42 Vernam Barbadoes
- 43 Broad Channel Park

Brooklyn

- 44 Fresh Creek Preserve*
- 45 Canarsie Park
- 46 Paerdegat Basin Park Preserve *
- 47 Four Sparrow Marsh*
- 48 Marine Park*
- 49 Prospect Park*
- 50 Dreier-Offerman Park

Staten Island

- 51 Shooters Island*
- 52 Graniteville Swamp Park*
- 53 Clove Lakes Park*
- 54 Eibs Pond Preserve*
- 55 Brady's Pond Park
- 56 Ocean Breeze Park*
- 57 Last Chance Pond Park
- 58 JHS Playground
- 59 Cedar Grove
- 60 Reed's Basket Willow Swamp*
- 61 Deere Park*
- 62 Richmond Parkway*
- 63 High Rock Park*
- 64 Blood Root Valley*
- 65 Willowbrook Park*
- 66 La Tourette Park*
- 67 Islington Pond Park*
- 68 Evergreen Park Preserve*
- 69 Fresh Kills Park*
- 70 Sweet Bay Magnolia Preserve*
- 71 Saw Mill Creek Marsh*
- 72 Prall's Island*
- 73 Mezzacappa Property/Neck Creek*
- 74 Isle of Meadows
- 75 Arden Heights Woods Preserve*
- 76 Crescent Beach
- 77 Blue Heron Park Preserve*
- 78 Bunker Pond Park*
- 79 Wolfe's Pond Park Preserve*
- 80 Lemon Creek Preserve*
- 81 Bloomingdale Park*
- 82 Fairview Park*
- 83 Long Pond Preserve*
- 84 Hybrid Oaks Woods*
- 85 Conference House Park*

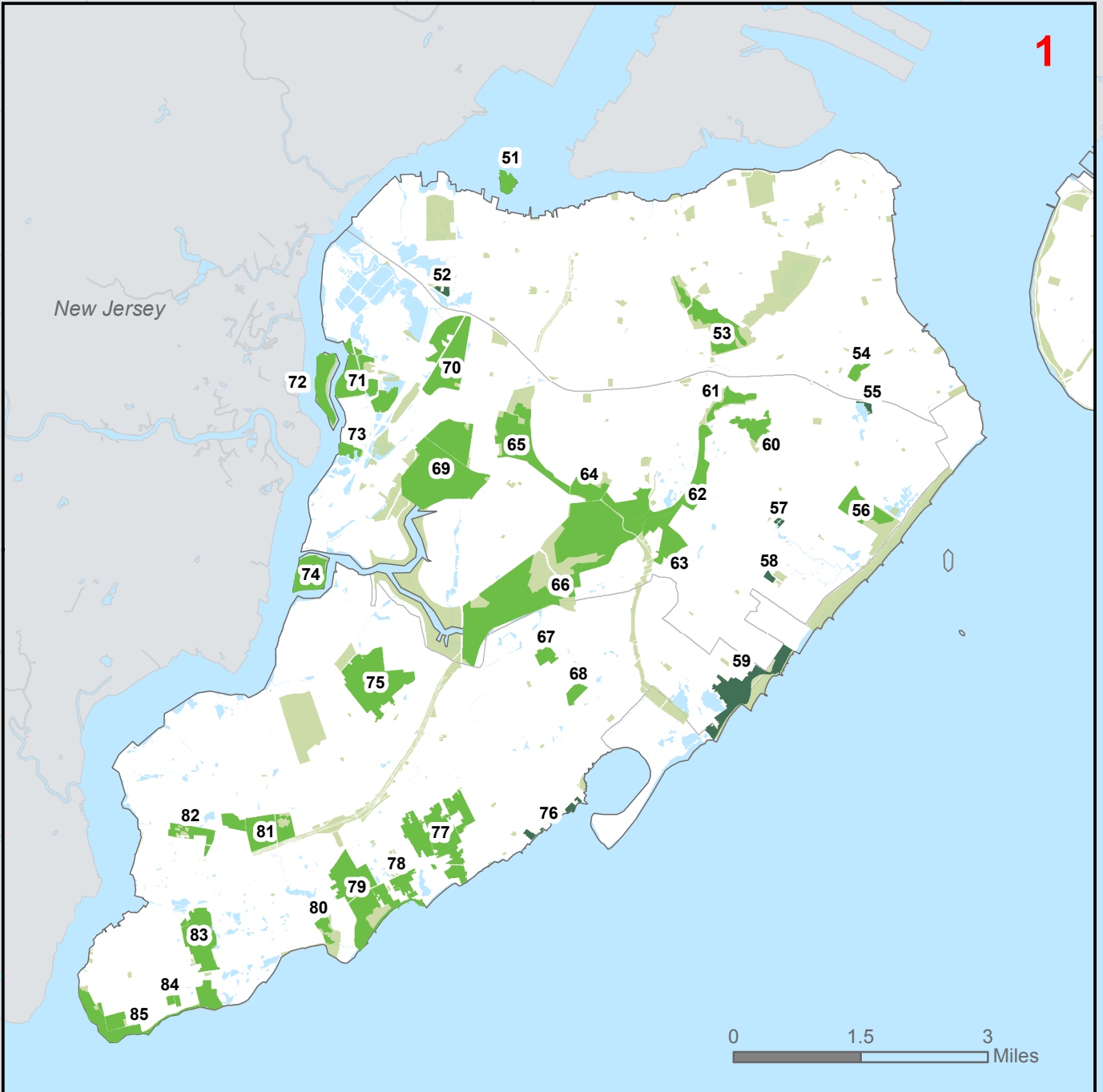
New York City Forever Wild and Natural Areas

- NYC Parks Natural Areas
- NYC Parks Forever Wild
- NYC Parklands
- Community Board Districts

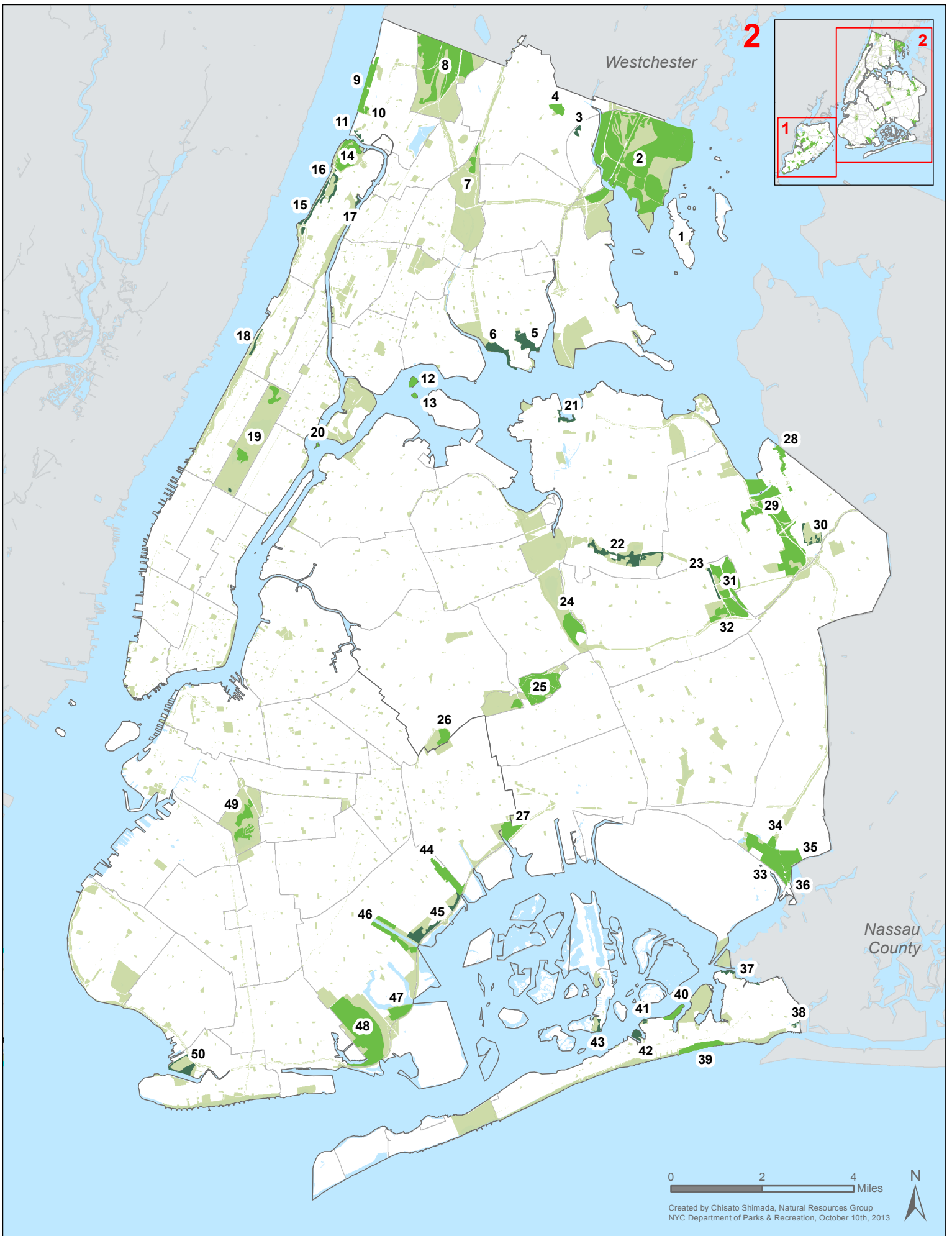
New Jersey

New Jersey

1



0 1.5 3 Miles



Westchester

Nassau
County

0 2 4 Miles

Created by Chisato Shimada, Natural Resources Group
NYC Department of Parks & Recreation, October 10th, 2013



Invasive Plants in New York

In 2012, the Governor of New York State signed into law the Invasive Species Prevention Act, which prohibits or regulates the transport and sale of certain invasive species¹, including plants. This act requires the New York State Department of Agriculture and Markets and the New York State Department of Environmental Conservation to develop regulations concerning the sale, purchase, possession, introduction, importation, and transport of these species.

This Act also directs the agencies to develop both a permit process, and specific lists of species, which will be subject to varying degrees of regulation. Towards this end, protocols have been developed to determine the invasiveness of certain species, and the results of running a species through these protocols will determine how they are regulated.

For purposes of this guide, the City of New York expects to follow the species rankings as determined by the State. This list does not include all invasive or potentially invasive plant species, but does include those that are expected to be regulated by proposed regulations.

The plants on this list are effectively banned from planting on public land, and it is strongly suggested that gardeners and landscape professionals use alternative species.

The table in this chapter is excerpted from the list issued with the proposed New York State regulations in October 2013. It will be superseded by the New York State official list upon adoption of the final regulations in 2014.

Invasive Species

An invasive species is defined as an organism that is not native to the ecosystem under consideration and whose introduction causes or is likely to cause harm to the environment, economy, or human health². Invasive plants harm the environment by displacing native flora, which in turn, impacts wildlife and other species dependant on the flora. They impact ecological stability and biodiversity by disrupting such processes as hydrology, nutrient cycling, natural succession, wildfire regime and soil erosion.

Invasive plants have damaged more than a thousand acres of Parks natural lands. Research suggests that a number of these invasive plants, particularly vines, will be beneficiaries of increased atmospheric carbon dioxide, which could make them an even larger problem. By

¹ Under the law, invasive species is defined as (a) nonnative to the ecosystem under the consideration; and (b) whose introduction causes or is likely to cause economic harm or harm human health, Environmental Conservation Law §9-1709 as amended.

² ECL §9-1703 (10).

prohibiting the planting of invasive plants and promoting native biodiversity and functional ecosystems, the City's ecological resilience will be increased.

New York State Regulation

Early attempts at regulation occurred in the neighboring states of Connecticut (2004) and Massachusetts (2006), and local laws were passed in Nassau and Suffolk counties (2007).

The New York State law was passed in consultation with a broad range of stakeholders including ecologists and the nursery and landscape industry. Under the regulatory framework, a given species is examined with both a scientific assessment and a socioeconomic assessment. Criteria including ecological impact, biological characteristics, dispersal ability, ecological amplitude and distribution, and difficulty of control are among those assessed.

Species exceeding certain thresholds as determined by the ranking protocols will be placed in one of two categories.

Prohibited – Unlawful to possess with the intent to sell, import, purchase, transport, introduce, or propagate except under a permit for disposal, control, research, or education.

Regulated – Possession, sale, purchase, propagation, and transport are legal, but these species may not be introduced into a free-living state on public land or in natural areas.

Those species not listed on one of the above categories will likely be considered unregulated, pending the final version of the regulations adopted. Grace periods may be specified in the final regulations.

What Does This Mean for New York City?

This law is primarily intended to exclude listed plants from commerce, so they will no longer be available for purchase or planting. Ultimately, it will bar certain plants from use in public landscapes. Residents and agencies will no longer be able to specify these plants in capital project designs, plant them in ornamental beds on private or public property, grow them at greenhouses, or offer them for sale. A permit process will be created for disposal, control and research activities involving some of these species.

Draft NYS Invasive Plant List

Floating & Submerged Aquatic

Scientific Name	Common Name	NYS Designation
<i>Egeria densa</i>	Brazilian Waterweed	Prohibited
<i>Myriophyllum x pinnatum</i>	Broadleaf Water Milfoil hybrid	Prohibited
<i>Myriophyllum heterophyllum</i>	Broadleaf Water-milfoil	Prohibited
<i>Cabomba caroliniana</i>	Carolina Fanwort	Prohibited
<i>Hydrocharis morsus-ranae</i>	Common Frogbit	Prohibited
<i>Myriophyllum spicatum</i>	Eurasian Water-milfoil	Prohibited
<i>Myriophyllum aquaticum</i>	Parrot-feather	Prohibited
<i>Didymosphenia geminata</i>	Rock Snot (diatom)	Prohibited
<i>Trapa natans</i>	Water Chestnut	Prohibited
<i>Hydrilla verticillata</i>	Water Thyme	Prohibited
<i>Nymphoides peltata</i>	Yellow Floating Heart	Prohibited

Emergent Wetland & Littoral

Scientific Name	Common Name	NYS Designation
<i>Glyceria maxima</i>	Reed Manna Grass	Prohibited
<i>Iris pseudacorus</i>	Yellow Iris	Prohibited
<i>Lepidium latifolium</i>	Broad-leaf Pepper-grass	Prohibited
<i>Ludwigia grandiflora</i> spp. <i>hexapetala</i>	Uruguayan Primrose-willow	Prohibited
<i>Ludwigia peploides</i>	Floating Primrose Willow	Prohibited
<i>Lythrum salicaria</i>	Purple Loosestrife	Prohibited
<i>Murdannia keisak</i>	Marsh Dewflower	Prohibited
<i>Phragmites australis</i>	Common Reed Grass	Prohibited

Terrestrial – Herbaceous

Scientific Name	Common Name	NYS Designation
<i>Achyranthes japonica</i>	Japanese Chaff Flower	Prohibited
<i>Alliaria petiolata</i>	Garlic Mustard	Prohibited
<i>Anthriscus sylvestris</i>	Wild Chervil	Prohibited
<i>Artemisia vulgaris</i>	Mugwort	Prohibited
<i>Arthraxon hispidus</i>	Small Carpgrass	Prohibited
<i>Brachypodium sylvaticum</i>	Slender False Brome	Prohibited
<i>Cardamine impatiens</i>	Narrowleaf Bittercress	Prohibited
<i>Centaurea stoebe ssp.</i>	Spotted Knapweed	Prohibited
<i>Cirsium arvense</i>	Canada Thistle	Prohibited
<i>Cynanchum louiseae</i>	Black Swallow-wort	Prohibited
<i>Cynanchum rossicum</i>	Pale Swallow-wort	Prohibited
<i>Dioscorea polystachya</i>	Chinese Yam	Prohibited
<i>Dipsacus laciniatus</i>	Cut-leaf Teasel	Prohibited
<i>Euonymus fortunei</i>	Winter Creeper	Regulated
<i>Euphorbia cyparissias</i>	Cypress Spurge	Prohibited
<i>Euphorbia esula</i>	Leafy Spurge	Prohibited
<i>Ficaria verna</i>	Lesser Celandine	Prohibited
<i>Heracleum mantegazzianum</i>	Giant Hogweed	Prohibited
<i>Humulus japonicus</i>	Japanese Hops	Prohibited
<i>Imperata cylindrica</i>	Cogon Grass	Prohibited
<i>Lespedeza cuneata</i>	Chinese Lespedeza	Prohibited
<i>Lysimachia vulgaris</i>	Garden Loosestrife	Prohibited
<i>Microstegium vimineum</i>	Japanese Stilt Grass	Prohibited
<i>Miscanthus sinensis</i>	Chinese Silver Grass	Regulated
<i>Oplismenus hirtellus</i>	Wavyleaf Basketgrass	Prohibited
<i>Reynoutria japonica</i>	Japanese Knotweed	Prohibited
<i>Reynoutria sachalinensis</i>	Giant Knotweed	Prohibited
<i>Reynoutria x bohemica</i>	Bohemian Knotweed	Prohibited
<i>Silphium perfoliatum</i>	Cup-plant	Prohibited

Terrestrial - Vines

Scientific Name	Common Name	NYS Designation
<i>Ampelopsis brevipedunculata</i>	Porcelain Berry	Prohibited
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	Prohibited
<i>Clematis terniflora</i>	Japanese Virgin's-bower	Regulated
<i>Lonicera japonica</i>	Japanese Honeysuckle	Prohibited
<i>Persicaria perfoliata</i>	Mile-a-minute Weed	Prohibited
<i>Pueraria montana</i>	Kudzu	Prohibited

Terrestrial – Shrubs & Trees

Scientific Name	Common Name	NYS Designation
<i>Acer platanoides</i>	Norway Maple	Regulated
<i>Acer pseudoplatanus</i>	Sycamore Maple	Prohibited
<i>Aralia elata</i>	Japanese Angelica Tree	Prohibited
<i>Berberis thunbergii</i>	Japanese Barberry	Prohibited
<i>Elaeagnus umbellata</i>	Autumn Olive	Prohibited
<i>Euonymus alatus</i>	Winged Euonymus	Regulated
<i>Frangula alnus</i>	European Buckthorn	Prohibited
<i>Ligustrum obtusifolium</i>	Border Privet	Prohibited
<i>Lonicera maackii</i>	Amur Honeysuckle	Prohibited
<i>Lonicera morrowii</i>	Morrow's Honeysuckle	Prohibited
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	Prohibited
<i>Lonicera x bella</i>	Fly Honeysuckle	Prohibited
<i>Phellodendron amurense</i>	Amur Cork Tree	Prohibited
<i>Phyllostachys aureosulcata</i>	Yellow Groove Bamboo	Prohibited
<i>Phyllostachys aurea</i>	Golden Bamboo	Prohibited
<i>Rhamnus cathartica</i>	Common Buckthorn	Prohibited
<i>Robinia pseudoacacia</i>	Black Locust	Regulated
<i>Rosa multiflora</i>	Multiflora Rose	Prohibited
<i>Rubus phoenicolasius</i>	Wineberry	Prohibited
<i>Salix atrocinerea</i>	Rusty Willow	Prohibited
<i>Vitex rotundifolia</i>	Beach Vitex	Prohibited

There are a number of additional species that have demonstrated tendencies toward naturalizing, especially near natural areas. While use of these species is not likely to be regulated by State law, caution must be exercised when planting these near a Forever Wild or natural area. These species include, but are not limited to Wisteria (*Wisteria floribunda* and *W. sinensis*), Siberian elm (*Ulmus pumila*), Scholar tree (*Styphnolobium japonica*), European White Poplar (*Populus alba*), English oak (*Quercus robur*), Callery pear (*Pyrus calleryana*), Siebold Viburnum (*Viburnum sieboldii*), Periwinkle (*Vinca minor*), and Arrow bamboo (*Pseudosasa japonica*).

Ecosystems of New York City

The mid-Atlantic region boasts a rich and diverse indigenous flora. Abundant rainfall, fairly evenly distributed, promotes vigorous plant growth, though seasonal drought occurs frequently. All new plantings will require attention to weeding and supplemental watering during drought, especially during the one-to-two-year establishment period, but informed plant selection can ensure adaptation to environmental conditions.

Plant communities can be described as areas where associated species thrive in conditions they are best suited for. It represents an ecosystem of interrelated plants, animals, water, and soil. The right plant for the right place occurs naturally in response to environmental conditions such as light exposure, soil conditions, salt and drought tolerance. New York City is a highly altered landscape, yet many native plants have maintained their community structure in natural areas and even reclaimed some of the built landscape. Habitats within New York City will vary greatly from borough to borough and cannot be easily compared to the ideal habitats outside of the urban context. Through centuries of adaptation, many tough, native plant species have co-evolved alongside the ever-increasing human population and the effects of pollution, compaction, urban rubble and fragmentation. The plant species listed within this manual make up the common plant communities that can still be found throughout the five boroughs. The native flora of New York City may not be what it used to be, but the species that still naturally exist in this urban center can be the plant palette from which we choose, for our restored and designed landscapes. It is imperative that we understand each plant species and the communities they can be found in; it is only then, when we can make educated decisions on how best to use these species in sustainable design.

Plants are grouped according to various associations found in the wild and these can direct appropriate plant combinations adapted to particular soil, light, and hydrologic conditions. Not all plants listed are commonly available from local nurseries, so availability should be confirmed prior to specification. As always, informed plant selection proceeds from familiarity with individual plants and their characteristics. Diversity and variety in planting can help encourage better establishment of successful vegetative cover and provide improved habitat and visual interest.

Close observation of established plant communities is often the best guide to planning successful plant associations. The lists provide suggestions, but not infallible guidelines. Consult recommended links and resources for additional information on appropriate plants for various designed and restored landscapes.

A. Coastal Communities: Maritime and Wetland Communities

Coastal regions are characterized by dynamic landforms and processes because they are the juncture between the lands, oceans, and atmosphere. Features such as dunes and wetlands constantly undergo change due to driving processes such as storms, sediment supply, and sea-level change (Titus 2009). Urban coastal regions are even more significantly changed in the name of development and a high-density human population. The effects of hurricanes and other major storms combined with higher sea levels are putting New York City's low-lying coastlines at risk. Restoration of our coastal plant communities and an attempt to design with nature will determine the long-term success and protection of coastal property and economic investment.

MARITIME

Maritime beach/dune communities are dominated by salt-tolerant grasses and herbs. The sand is relatively unstable at the ocean-fronting beach and only a few plant species can survive in these harsh conditions. Stabilized back dunes transition into maritime grasslands and shrublands. These low-lying areas near the coast are subject to off-shore winds and occasional salt spray. These conditions will naturally stunt trees and support the shrubland community that will inhabit the dry, rolling outwash plains and moraine of the Atlantic coastal plain. The plant community lines naturally overlap in this maritime setting and can be of extraordinary floristic diversity. Diversity will decrease in areas that occur on coastal landfill sites where dredged sand was used as fill.

MARITIME BEACH/DUNE

Examples Include: Plumb Beach (BK), Far Rockaway (QU), and Conference House (SI).

Recommended Plants:

Graminoids

Ammophila breviligulata
Cenchrus longispinus
Cenchrus tribuloides
Cyperus grayi
Eragrostis spectabilis
Panicum virgatum

Beach grass
Common sandbur
Dune sandbur
Gray's flatsedge
Purple lovegrass
Switchgrass

Forbs

Atriplex mucronata
Cakile edentula
Chamaesyce polygonifolia
Krigia virginica
Lechea maritima
Polygonella articulata

Sea-beach orach
American searocket
Seaside sandmat
Virginia dwarfdandelion
Beach pinweed
Jointweed

Solidago sempervirens

Seaside goldenrod

Vines

Parthenocissus quinquefolia

Virginia creeper

Strophostyles helvula

Trailing wild bean

Shrubs

Hudsonia tomentosa

False heather

Morella pensylvanica

Northern bayberry

Prunus maritima

Beach plum

Rosa carolina

Pasture rose

Trees

Acer negundo

Boxelder

Amelanchier canadensis

Canadian serviceberry

Betula populifolia

Gray birch

Ilex opaca

American holly

Juniperus virginiana

Eastern red cedar

Quercus velutina

Black oak

Populus tremuloides

Quaking aspen

Prunus serotina

Black cherry

MARITIME GRASSLAND

Examples Include: Marine Park (BK), Arverne (QU), Ocean Breeze (SI).

Recommended Plants:

Graminoids

Ammophila breviligulata

Andropogon virginicus

Aristida dichotoma

Aristida tuberculosa

Eragrostis spectabilis

Juncus greenei

Panicum virgatum

Schizachyrium littorale

Schizachyrium scoparium

Sorghastrum nutans

Beach grass

Broom-sedge

Churchmouse threeawn

Seaside threeawn

Purple love grass

Greene's rush

Switchgrass

Coastal little bluestem

Little bluestem

Indiangrass

Forbs

Asclepias syriaca

Asclepias tuberosa

Desmodium paniculatum

Eupatorium altissimum

Eupatorium hyssopifolium

Euthamia caroliniana

Euthamia graminifolia

Ioncatis linariifolius

Krigia virginica

Lespedeza capitata

Nuttallanthus canadensis

Oenothera biennis

Oenothera fruticosa

Opuntia humifusa

Plantago aristata

Potentilla canadensis

Pseudognaphalium obtusifolium

Rudbeckia hirta

Solidago canadensis

Solidago nemoralis

Solidago sempervirens

Symphotrichum ericoides

Symphotrichum novae-angliae

Trichostema dichotomum

Common milkweed

Butterfly weed

Panicled tick-trefoil

Tall boneset

Hyssop-leaved boneset

Slender goldenrod

Lance-leaved goldenrod

Flaxleaf whitetop aster

Virginia dwarf dandelion

Round-headed bush-clover

Blue toadflax

Common evening primrose

Sundrops

Devil's tongue

Largebracted plantain

Dwarf cinquefoil

Rabbit-tobacco

Black-eyed Susan

Canada goldenrod

Gray goldenrod

Seaside goldenrod

White heath aster

New England aster

Forked blue curls

Shrubs

Morella pensylvanica

Rhus copallinum

Rubus flagellaris

Northern bayberry

Winged sumac

Dewberry

MARITIME SHRUBLAND

Examples Include: Plumb Beach (BK), Dubos Point (QU), Ocean Breeze (SI).

Recommended Plants:

Graminoids

<i>Ammophila breviligulata</i>	Beach grass
<i>Andropogon virginicus</i>	Broom-sedge
<i>Aristida dichotoma</i>	Churchmouse threeawn
<i>Aristida tuberculosa</i>	Seaside threeawn
<i>Carex pensylvanica</i>	Pennsylvania sedge
<i>Cyperus diandrus</i>	Umbrella flatsedge
<i>Cyperus echinatus</i>	Globe flatsedge
<i>Eragrostis spectabilis</i>	Purple love grass
<i>Juncus tenuis</i>	Pathrush
<i>Panicum virgatum</i>	Switchgrass
<i>Schizocyrium scoparium</i>	Little bluestem
<i>Scirpus pungens</i>	Common threesquare
<i>Scirpus validus</i>	Soft-stem bulrush
<i>Sorghastrum nutans</i>	Indiangrass
<i>Tridens flavus</i>	Purpletop Tridens

Forbs

<i>Agalinus purpurea</i>	Purple false foxglove
<i>Asclepias syriaca</i>	Common milkweed
<i>Asclepias tuberosa</i>	Butterfly weed
<i>Desmodium paniculatum</i>	Panicled tick-trefoil
<i>Eupatorium serotinum</i>	Late Eupatorium
<i>Euthamia graminifolia</i>	Lance-leaved goldenrod
<i>Helenium flexuosum</i>	Southern sneezeweed
<i>Ionactis linariifolius</i>	Flaxleaf whitetop aster
<i>Lespedeza capitata</i>	Round-headed bush-clover
<i>Maianthemum stellata</i>	Star-flowered Solomon's seal
<i>Nuttallanthus canadensis</i>	Blue toadflax
<i>Oenothera biennis</i>	Common evening primrose
<i>Oenothera fruticosa</i>	Sundrops
<i>Opuntia humifusa</i>	Devil's tongue
<i>Plantago aristata</i>	Largebracted plantain
<i>Potentilla canadensis</i>	Dwarf cinquefoil
<i>Rudbeckia hirta</i>	Black-eyed Susan
<i>Solidago rugosa</i>	Wrinkleleaf goldenrod
<i>Solidago sempervirens</i>	Seaside goldenrod
<i>Suaeda linearis</i>	Annual sea blite
<i>Suaeda maritima</i>	Sea blite

Symphotrichum ericoides
Symphotrichum novi-belgii

White heath aster
New York aster

Vines

Celastrus scandens
Menispermum canadense
Parthenocissus quinquefolia
Strophostyles helvula

American bittersweet
Moon seed
Virginia creeper
Tailing wild bean

Shrubs

Clethra alnifolia
Gaylussacia baccata
Hudsonia tomentosa
Morella pensylvanica
Photinia melanocarpa
Photinia pyrifolia
Prunus maritima
Rhus copallina
Rhus glabra
Rhus typhina
Rosa carolina
Rubus flagellaris
Rubus pensilvanicus
Sambucus canadensis
Vaccinium corymbosum
Viburnum dentatum

Sweet pepperbush
Black huckleberry
False heather
Northern bayberry
Black chokeberry
Red chokeberry
Beach plum
Winged sumac
Smooth sumac
Staghorn sumac
Pasture rose
Dewberry
Pennsylvania blackberry
Elderberry
Highbush blueberry
Arrow-wood

Trees

Acer rubrum
Amelanchier canadensis
Ilex opaca
Juniperus virginiana
Pinus rigida
Prunus serotina
Salix nigra
Salix eriocephala
Sassafras albidum

Red maple
Canadian serviceberry
American holly
Eastern red cedar
Pitch pine
Black cherry
Black willow
Stiff willow
Sassafras

WETLANDS

Tidal wetland habitats occur in low-lying areas along the coast where plants can tolerate periodic soil saturation. The twice-daily tides allow soil to drain and become aerated for a period of time. The low salt marsh community lies in a zone from mean sea level up to mean high tide tolerating the saline waters. The high salt marsh community lies in a zone from mean high tide up to the limit of spring tides tolerating brackish waters. Only about 4,000 acres of salt marsh still exist around New York City. By 1950, over 20,000 acres were destroyed after wetlands were filled with trash and construction debris (Luttenberg et al 1993).

LOW SALT MARSH

A tidal marsh zone characterized by daily flooding. The term “low” refers to the elevation of the land which occurs between the mean sea level and mean high tide.

Examples Include: Pelham Bay Park (BX), Marine Park (BK), Four Sparrow Marsh, (BK), Inwood Hill Park (MN), Alley Pond Park (QU), Sawmill Creek (SI).

Recommended Plants:

Graminoids

Spartina alternifolia

Smooth cordgrass

HIGH SALT MARSH

The transition from the low marsh to the high marsh occurs approximately at the mean high water mark. The high marsh will only be flooded during spring tides or storm surges.

Graminoids

Bolboschoenus robustus

Salt marsh bulrush

Distichlis spicata

Salt grass

Juncus gerardii

Black grass

Panicum virgatum

Switchgrass

Schoenoplectus pungens

Common threesquare

Spartina cynosuroides

Big cordgrass

Spartina patens

Salt-meadow cordgrass

Forbs

Hibiscus moscheutos

Rose mallow

Limonium carolinianum

Sea lavender

Salicornia depressa

Virginia glasswort

Solidago sempervirens

Seaside goldenrod

Suaeda linearis

Tall sea blite

Suaeda maritima

Sea blite

Symphyotrichum novi-belgii

New York aster

Symphyotrichum tenuifolium

Salt marsh aster

Shrubs

Baccharis halmifolia

Iva frutescens

Groundsel bush

Marsh elder

EMERGENT MARSH

A non-tidal, freshwater wetland occurs in low-lying areas along rivers and other fresh bodies of water that are subject to flooding, isolated depressions that collect surface water, as well as areas with high groundwater tables. Water levels fluctuate seasonally and usually drop in mid to late summer. A shallow emergent marsh occurs on mineral soils that are more well-drained than a deep emergent marsh with water depths from 6" to 3.3'. Shallow emergent marshes can be considered wet meadows, gradually sloping shores of ponds, lakes, and streams, and temporarily flooded drainage swales. A deep emergent marsh occurs on mineral soils or fine-grained organic soils (muck or well-decomposed peat) with water depths that may reach 6" to 6.6'. Only 2,000 acres of freshwater wetlands remain with the five boroughs from the expansive 224,000 acres that date back to the Industrial Revolution (Luttenberg et al 1993).

SHALLOW EMERGENT MARSH

Examples Include: Seton Falls (BX), Prospect Park (BK), Central Park –Belvedere (MN), Flushing Meadows-Willow Lake (QU), Blue Heron (SI), High Rock (SI)

Recommended Plants:

Ferns

<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Osmunda regalis</i>	Royal fern
<i>Thelypteris palustris</i>	Marsh fern

Graminoids

<i>Andropogon virginicus</i>	Broom-sedge
<i>Carex annectens</i>	Yellow-fruit sedge
<i>Carex comosa</i>	Bottlebrush sedge
<i>Carex crinita</i>	Fringed sedge
<i>Carex lupulina</i>	Hop sedge
<i>Carex lurida</i>	Shallow sedge
<i>Carex stipata</i>	Awlfruit sedge
<i>Carex stricta</i>	Tussock sedge
<i>Carex vulpinoidea</i>	Fox sedge
<i>Juncus canadensis</i>	Canadian rush
<i>Juncus effusus</i>	Soft rush
<i>Leersia oryzoides</i>	Rice cut-grass
<i>Rhynchospora capitellata</i>	Brownish beaksedge
<i>Schoenoplectus pungens</i>	Common threesquare
<i>Schoenoplectus tabernaemontani</i>	Soft stem bulrush
<i>Scirpus atrovirens</i>	Green bulrush
<i>Scirpus cyperinus</i>	Wool grass

Sparganium eurycarpum
Tripsacum dactyloides

Giant bur-seed
Eastern gamagrass

Forbs

Alisma subcordatum
Asclepias incarnata
Chelone glabra
Desmodium canadense
Doellingeria umbellata
Eupatorium perfoliatum
Eutrochium maculatum
Helenium autumnale
Helianthis giganteus
Hibiscus moscheutos
Iris prismatica
Iris versicolor
Lobelia cardinalis
Lobelia siphilitica
Ludwigia alternifolia
Peltandra virginica
Polygonum arifolium
Polygonum sagittatum
Pontederia cordata
Sagittaria latifolia
Sisyrinchium angustifolium
Symphotrichum novae-angliae
Symphotrichum novi-belgii
Tradescantia virginiana
Verbena hastata
Vernonia novaboracensis
Viola cucullata

Water plantain
Swamp milkweed
Turtlehead
Showy tick-trefoil
Flat top aster
Boneset
Spotted Joe-pye weed
Common sneezeweed
Tall sunflower
Rose-mallow
Slender blue iris
Large blue flag
Cardinal flower
Great lobelia
Seedbox
Green arrow arum
Halberd-leaved tearthumb
Arrowleaf tearthumb
Pickerelweed
Broadleaf arrowhead
Blue-eyed grass
New England aster
New York aster
Spiderwort
Swamp verbena
New York ironweed
Marsh blue violet

Shrubs

Baccharis halmifolia
Cephalanthus occidentalis
Rosa palustris

Groundsel bush
Buttonbush
Swamp rose

DEEP EMERGENT MARSH

Examples Include: Van Cortlandt Lake (BX), Canarsie Beach Park (BK), Central Park-Belvedere (MN), Baisley Pond (QU), Wolfe's Pond (SI).

Recommended Plants:

Graminoids

Carex comosa

Schoenoplectus tabernaemontani

Spartina pectinata

Bottlebrush sedge

Soft stem bulrush

Prairie cordgrass

Forbs

Hibiscus moscheutos

Impatiens capensis

Lobelia cardinalis

Peltandra virginica

Pontederia cordata

Rumex verticillatus

Sagittaria latifolia

Typha angustifolia

Typha latifolia

Rose-mallow

Jewelweed

Cardinal flower

Green arrow arum

Pickerelweed

Swamp dock

Broadleaf arrowhead

Narrowleaf cattail

Broadleaf cattail

Shrubs

Alnus serrulata

Cephalanthus occidentalis

Cornus amomum

Viburnum dentatum

Common alder

Buttonbush

Silky dogwood

Arrowwood

B. Herbaceous Communities

Herbaceous communities are plant communities characterized by a tree canopy cover of less than 25%. Herbaceous plants make up the majority of the cover.

SERPENTINE BARRENS

The plant communities of the serpentine barrens are a state and globally ranked habitat because of the geographically restricted serpentine bedrock they are found on. Serpentine bedrock is light green bedrock that is thought to have been forced from the earth's core 450 million years ago during plate shifting activity. The green color is due to the high concentration of magnesium in the rock (NYNHP 2011). Staten Island is the only borough where you can find remnants of this unique habitat. The open grass-savanna communities thrive in the nutrient poor soils but most sites have been obliterated by forest succession in the absence of wildfire and later, by conversion to urban uses (Kiviat and Johnson 2013).

Examples Include: Seaview Meadow (SI).

Recommended Plants:

Graminoids

Aristida oligantha

Aristida purpurascens

Danthonia spicata

Dichanthelium clandestinum

Eragrostis spectabilis

Juncus tenuis

Panicum virgatum

Schizachyrium scoparium

Sorghastrum nutans

Prarie threeawn

Arrowfeather threeawn

Poverty oatgrass

Deertongue

Purple lovegrass

Path rush

Switchgrass

Little bluestem

Indiangrass

Forbs

Eupatorium serotinum

Lespedeza capitata

Potentilla simplex

Pycnanthemum tenuifolium

Solidago nemoralis

Symphyotrichum ericoides

Symphyotrichum laeve

Symphyotrichum pilosum

Late eupatorium

Round-headed bush-clover

Common cinquefoil

Narrow-leaved mountain mint

Gray goldenrod

White heath aster

Smooth blue aster

Hairy white old field aster

Vines

Parthenocissus quinquefolia

Virginia creeper

Shrubs

Rhus aromatica

Fragrant sumac

Rhus copallina
Rubus flagellaris

Winged sumac
Dewberry

Trees

Betula populifolia
Quercus velutina
Populus tremuloides
Prunus serotina
Sassafras albidum

Gray birch
Black oak
Quaking aspen
Black cherry
Sassafras

SUCCESSIONAL OLD FIELDS/URBAN LOT

Successional old fields/urban lots are home to some of the toughest native plants that New York City can claim. These plants can thrive in areas with low nutrient levels, low permeability, a minimal amount of organic matter, and high salinity levels resulting from urban fill and runoff. Many may see these plants as “weeds” growing out of concrete cracks, but these pioneer species can find their way in the most severe landscapes, providing important ecosystem services. Many non-native species thrive in these communities as well. Native plants that can compete with these non-native species are key players in maintaining a balance in the constant battle of invasive plant control.

Examples Include: Van Cortlandt-Vault Hill (BX), Marine Park (BK), Central Park-North Woods (MN), Idlewild (QU), Mount Loretto (SI).

Recommended Plants:

Graminoids

Andropogon virginicus

Aristida oligantha

Carex blanda

Eragrostis spectabilis

Juncus tenuis

Tridens flavus

Panicum virgatum

Schizachyrium scoparium

Broom-sedge

Prarie threeawn

Eastern woodland sedge

Purple lovegrass

Path rush

Purpletop tridens

Switchgrass

Little bluestem

Forbs

Apocynum cannabinum

Asclepias syriaca

Bidens frondosa

Desmodium paniculatum

Eupatorium serotinum

Euthamia graminifolia

Krigia virginica

Oenothera biennis

Plantago aristata

Potentilla canadensis

Potentilla simplex

Solidago canadensis

Solidago juncea

Solidago nemoralis

Solidago rugosa

Solidago sempervirens

Symphyotrichum ericoides

Symphyotrichum laeve

Symphyotrichum pilosum

Indian hemp

Common milkweed

Beggarticks

Panicled tick-trefoil

Late eupatorium

Lance-leaved goldenrod

Virginia dwarfdandelion

Common evening primrose

Largebracted plantain

Dwarf cinquefoil

Common cinquefoil

Canada goldenrod

Early goldenrod

Gray goldenrod

Wrinkleleaf goldenrod

Seaside goldenrod

White heath aster

Smooth blue aster

Hairy white oldfield aster

Verbena urticifolia

White vervain

Vines

Parthenocissus quinquefolia

Virginia creeper

Strophostyles helvula

Tailing wild bean

Shrubs

Baccharis halmifolia

Groundsel bush

Rhus copallina

Winged sumac

Rhus glabra

Smooth sumac

Rhus typhina

Staghorn sumac

Rubus flagellaris

Dewberry

Rubus pensilvanicus

Pennsylvania blackberry

Trees

Acer negundo

Boxelder

Betula populifolia

Gray birch

Celtis occidentalis

Common hackberry

Juglans nigra

Black walnut

Juniperus virginiana

Eastern red cedar

Populus deltoides

Cottonwood

Populus grandidentata

Bigtooth aspen

Prunus serotina

Black cherry

Quercus palustris

Pin oak

OAK OPENING

These communities were originally characterized as openings that occurred as gaps within extensive oak-hickory forests. A grass-savanna community would flourish on these very well-drained sites, on knobs or hilltops with shallow soil over rock outcrops or sandy to gravelly soils. Fragmentation throughout New York City's remaining forests restricts areas where this plant community still naturally occurs. Woody species will continue to creep in from the surrounding tree and shrub lines, unless maintained to keep a meadow-like open character.

Examples Include: Pelham Bay-Orchard Beach Meadow (BX), Central Park-North Woods (MN), Clove Lakes (SI).

Recommended Plants:

Ferns

<i>Dennstaedtia punctilobula</i>	Hay-scented fern
<i>Thelypteris novaboracensis</i>	New York fern

Graminoids

<i>Agrostis perennans</i>	Autumn bent-grass
<i>Andropogon gerardii</i>	Big bluestem
<i>Aristida oligantha</i>	Prarie threeawn
<i>Aristida purpurascens</i>	Arrowfeather threeawn
<i>Carex pensylvanica</i>	Pennsylvania sedge
<i>Dichanthelium clandestinum</i>	Deertongue
<i>Elymus hystix</i>	Bottlebrush grass
<i>Eragrostis spectabilis</i>	Purple lovegrass
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Sorghastrum nutans</i>	Indiangrass
<i>Tridens flavus</i>	Purpletop tridens
<i>Tripsacum dactyloides</i>	Eastern gamagrass

Forbs

<i>Allium canadense</i>	Wild garlic
<i>Asclepias syriaca</i>	Common milkweed
<i>Asclepias tuberosa</i>	Butterfly weed
<i>Desmodium canadense</i>	Showy tick-trefoil
<i>Doellingeria umbellata</i>	Flat top aster
<i>Eupatorium hyssopifolium</i>	Hyssop-leaved boneset
<i>Eupatorium serotinum</i>	Late eupatorium
<i>Euthamia graminifolia</i>	Lance-leaved goldenrod
<i>Eutrochium purpureum</i>	Sweet Joe-pye weed
<i>Geranium maculatum</i>	Wild geranium
<i>Helianthus decapetalus</i>	Thin-leaved sunflower
<i>Helianthus divaricatus</i>	Woodland sunflower

Iris prismatica
Iris versicolor
Lespedeza capitata
Monarda fistulosa
Oenothera fruticosa
Potentilla simplex
Pycnanthemum tenuifolium
Rudbeckia hirta
Silene stellata
Solidago juncea
Solidago nemoralis
Solidago odora
Solidago rugosa
Solidago speciosa
Trichostema dichotomum

Slender blue iris
Blue flag iris
Round-headed bush-clover
Wild bergamot
Sundrops
Common cinquefoil
Narrow-leaved mountain mint
Black-eyed Susan
Starry campion
Early goldenrod
Gray goldenrod
Sweet goldenrod
Wrinkleleaf goldenrod
Showy goldenrod
Forked blue curls

Shrubs

Cornus racemosa
Gaylussacia baccata
Morella pensylvanica
Rhododendron periclymenoides
Rhus copallina
Rhus glabra
Rhus typhina
Rosa virginiana
Rubus flagellaris
Rubus idaeus
Rubus pensilvanicus
Spiraea alba var. latifolia
Vaccinium angustifolium
Vaccinium pallidum
Viburnum dentatum

Grey dogwood
Black huckleberry
Northern bayberry
Pinkster azalea
Winged sumac
Smooth sumac
Staghorn sumac
Virginia rose
Dewberry
Red raspberry
Pennsylvania blackberry
Meadowsweet
Lowbush blueberry
Early low blueberry
Arrowwood

Trees

Prunus serotina
Populus grandidentata
Populus tremuloides
Quercus alba
Quercus palustris
Quercus velutina

Black cherry
Bigtooth aspen
Quaking aspen
White oak
Pin oak
Black oak

Upland Shrubland Communities

Upland shrublands are plant communities characterized by a shrub canopy of at least 50%.

SHRUB SWAMP

An inland, freshwater wetland, that is dominated by woody plant species less than 20 feet tall. These swamps occur along the shores of ponds, lakes or rivers and in wet depressions and valleys. The substrate is usually a mineral soil or muck. Seasonal fluctuations in the water levels support a diverse flora and fauna.

Examples Include: Seton Falls (BX), Alley Pond (QU), High Rock (SI).

Recommended Plants:

Ferns

<i>Dryopteris cristata</i>	Crested woodfern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Osmunda regalis</i>	Royal fern
<i>Thelypteris palustris</i>	Marsh fern
<i>Woodwardia areolata</i>	Netted chain fern

Graminoids

<i>Carex annectens</i>	Yellow-fruit sedge
<i>Carex atlantica</i>	Prickly bog sedge
<i>Carex comosa</i>	Bottlebrush sedge
<i>Carex crinita</i>	Fringed sedge
<i>Carex lupulina</i>	Hop sedge
<i>Carex lurida</i>	Shallow sedge
<i>Carex stipata</i>	Awlfruit sedge
<i>Carex stricta</i>	Tussock sedge
<i>Carex vulpinoidea</i>	Fox sedge
<i>Dulichium arundinaceum</i>	Three-way sedge
<i>Juncus canadensis</i>	Canadian rush
<i>Juncus effuses</i>	Soft rush
<i>Leersia oryzoides</i>	Rice cut-grass
<i>Rhynchospora capitellata</i>	Brownish beaksedge
<i>Scirpus atrovirens</i>	Green bulrush

Forbs

<i>Asclepias incarnata</i>	Swamp milkweed
<i>Bidens frondosa</i>	Beggarticks
<i>Doellingeria umbellata</i>	Flat top aster
<i>Chelone glabra</i>	Turtlehead
<i>Decodon verticillatus</i>	Swamp loostrife

Desmodium canadense
Eupatorium perfoliatum
Hibiscus moscheutos
Impatiens capensis
Iris prismatica
Lobelia cardinalis
Lobelia siphilitica
Ludwigia alternifolia
Lysimachia ciliata
Peltandra virginica
Polygonum arifolium
Polygonum hydropiperoides
Polygonum sagittatum
Sisyrinchium angustifolium
Symphotrichum novae-angliae
Thalictrum pubescens
Vernonia novaboracensis
Viola cucullata

Vines

Clematis virginiana
Mikania scandens

Shrubs

Cephalanthus occidentalis
Clethra alnifolia
Cornus amomum
Cornus racemosa
Eubotrys racemosa
Ilex glabra
Ilex verticillata
Lindera benzoin
Lyonia lingustrina
Photinia floribunda
Photinia pyrifolia
Rhododendron viscosum
Rosa palustris
Sambucus canadensis
Spiraea alba var. latifolia
Spiraea tomentosa
Vaccinium corymbosum
Viburnum dentatum

Trees

Acer rubrum

Showy tick-trefoil
Boneset
Rose-mallow
Jewelweed
Slender blue iris
Cardinal flower
Great lobelia
Seedbox
Fringed loosestrife
Green arrow arum
Halberd-leaved tearthumb
Swamp smartweed
Arrowleaf tearthumb
Blue-eyed grass
New England aster
Tall meadow-rue
New York ironweed
Marsh blue violet

Virgin's bower
Climbing hempweed

Buttonbush
Sweet pepperbush
Silky dogwood
Grey dogwood
Fetterbush
Inkberry
Winterberry
Spicebush
Male-berry
Purple fruit chokeberry
Red chokeberry
Pinkster azalea
Swamp rose
Elderberry
Meadowsweet
Hardhack
Highbush blueberry
Arrowwood

Red maple

SUCCESSIONAL SHRUBLAND

A shrubland that occurs on sites that have been cleared or otherwise disturbed. This plant community has at least a 50% shrub cover. Pioneer tree species, such as the gray birch (*Betula populifolia*) and the red maple (*Acer rubrum*) are usually mixed in with this young habitat. Herbs, grasses, and ferns provide a great ground cover for a diverse fauna.

Examples Include: Marine Park (BK), Mariner's Marsh (SI).

Recommended Plants:

Ferns

Dennstaedtia punctilobula

Hay-scented fern

Thelypteris novaboracensis

New York fern

Graminoids

Andropogon gerardii

Big bluestem

Andropogon virginicus

Broom-sedge

Aristida oligantha

Prarie threeawn

Carex scoparia

Pointed broom sedge

Dichantherium clandestinum

Deertongue

Juncus tenuis

Path rush

Panicum virgatum

Switchgrass

Rhynchospora capitellata

Brownish beaksedge

Schizachyrium scoparium

Little bluestem

Scirpus atrovirens

Green bulrush

Scirpus cyperinus

Wool grass

Sorghastrum nutans

Indiangrass

Forbs

Asclepias syriaca

Common milkweed

Asclepias tuberosa

Butterfly weed

Desmodium paniculatum

Panicled tick-trefoil

Eupatorium perfoliatum

Boneset

Eupatorium serotinum

Late eupatorium

Eutrochium maculatum

Spotted Joe-pye weed

Eutrochium purpureum

Sweet Joe-Pye weed

Krigia virginica

Virginia dwarfdandelion

Lespedeza capitata

Round-headed bush-clover

Monarda fistulosa

Wild bergamot

Monarda punctata

Spotted beebalm

Plantago aristata

Largebracted plantain

Potentilla simplex

Common cinquefoil

Pseudognaphalium obtusifolium

Rabbit-tobacco

Rudbeckia hirta

Black-eyed Susan

Solidago odora

Sweet goldenrod

Solidago nemoralis
Solidago rugosa
Solidago sempervirens

Gray goldenrod
Wrinkleleaf goldenrod
Seaside goldenrod

Vines

Menispermum canadense
Parthenocissus quinquefolia
Strophostyles helvula
Vitis vulpina

Moon seed
Virginia creeper
Tailing wild bean
Frost grape

Shrubs

Cornus racemosa
Gaylussacia baccata
Photinia melanocarpa
Rhus copallina
Rhus glabra
Rhus typhina
Rosa carolina
Rosa virginiana
Rubus flagellaris
Rubus idaeus
Rubus pensilvanicus
Sambucus canadensis
Spiraea tomentosa
Vaccinium angustifolium
Vaccinium pallidum
Viburnum dentatum

Grey dogwood
Black huckleberry
Black chokeberry
Winged sumac
Smooth sumac
Staghorn sumac
Pasture rose
Virginia rose
Dewberry
Red raspberry
Pennsylvania blackberry
Elderberry
Hardhack
Lowbush blueberry
Early low blueberry
Arrowwood

Trees

Acer rubrum
Acer saccharinum
Amelanchier canadensis
Betula populifolia
Juniperus virginiana
Populus deltoides
Populus grandidentata
Populus tremuloides
Prunus serotina

Red maple
Silver maple
Canadian serviceberry
Grey birch
Eastern red cedar
Cottonwood
Bigtooth aspen
Quaking aspen
Black cherry

C. Wetland Forest Communities

Wetland forests are plant communities which occur in poorly drained depressions on inorganic soils throughout the New York City area.

FLOODPLAIN FOREST

This hardwood forest community occurs on mineral soils in low-lying areas near river floodplains. These areas are flooded regularly in the spring and intermittently on more upland areas. Small stream floodplain forests will be less disturbed than river floodplain forests where river currents flowing through these areas can scour the landscape.

Examples Include: Bronx River Corridor (BX), Willowbrook (SI).

Recommended Plants:

Ferns

Athyrium felix-femina

Onoclea sensibilis

Osmunda cinnamomea

Osmunda claytoniana

Lady fern

Sensitive fern

Cinnamon fern

Interrupted fern

Graminoids

Carex crinita

Carex intumescens

Carex lupulina

Carex radiata

Carex rosea

Carex vulpinoidea

Cinna arundinacea

Danthonia compressa

Glyceria striata

Juncus tenuis

Juncus canadensis

Rhynchospora capitellata

Scirpus atrovirens

Fringed sedge

Bladder sedge

Hop sedge

Eastern star sedge

Rosy sedge

Fox sedge

Stout woodreed

Flattened oatgrass

Fowl mannagrass

Path rush

Canadian rush

Brownish beaksedge

Green bulrush

Forbs

Ageratina altissima

Allium canadense

Arisaema triphyllum

Bidens frondosa

Boehmeria cylindrica

Chelone glabra

Claytonia virginica

Collinsonia canadensis

White snakeroot

Wild garlic

Jack-in-the-Pulpit

Beggarticks

False nettle

Turtlehead

Spring beauty

Horse balm

Erythronium americanum
Eupatorium perfoliatum
Eutrochium maculatum
Geranium maculatum
Geum canadense
Helianthus decapetalus
Hydrophyllum virginianum
Impatiens capensis
Iris versicolor
Lobelia cardinalis
Lycopus americanus
Lysimachia ciliata
Osmorhiza longistyles
Polygonum hydropiperoides
Polygonum virginianum
Thalictrum pubescens
Symplocarpus foetidus

Trout lily
Boneset
Spotted Joe-pye weed
Wild geranium
White avens
Thin-leaved sunflower
Virginia waterleaf
Jewelweed
Blue flag iris
Cardinal flower
Water horehound
Fringed loosestrife
Longstyle sweetroot
Swamp smartweed
Jumpseed
Tall meadow-rue
Skunk cabbage

Vines

Clematis virginiana
Smilax herbacea
Vitis labrusca
Vitis riparia

Virgin's bower
Carrion flower
Fox grape
River grape

Shrubs

Cephalanthus occidentalis
Clethra alnifolia
Cornus amomum
Cornus racemosa
Eubotrys racemosa
Ilex verticillata
Lindera benzoin
Photinia pyrifolia
Rhododendron viscosum
Rosa palustris
Rubus occidentalis
Sambucus canadensis
Spiraea alba var. latifolia
Spiraea tomentosa
Vaccinium corymbosum
Viburnum dentatum

Buttonbush
Sweet pepperbush
Silky dogwood
Grey dogwood
Fetterbush
Inkberry
Spicebush
Red chokeberry
Swamp azalea
Swamp rose
Black raspberry
Elderberry
Meadowsweet
Hardhack
Highbush blueberry
Arrowwood

Trees

Acer negundo
Acer rubrum

Boxelder
Red maple

Betula nigra
Carya cordiformis
Carya ovata
Carya tomentosa
Celtis occidentalis
Liquidambar styraciflua
Nyssa sylvatica
Platanus occidentalis
Populus deltoides
Quercus bicolor
Quercus palustris
Salix nigra
Ulmus americana

River birch
Bitternut hickory
Shagbark hickory
Mockernut hickory
Common hackberry
Sweetgum
Black tupelo
American sycamore
Eastern cottonwood
Swamp white oak
Pin oak
Black willow
American elm

BOTTOMLAND FOREST

A deciduous forested wetland community occurs along rivers and streams. These river swamps are seasonally flooded and considered a broad floodplain forest with varying elevations and land forms. The changing soil elevations and hydrological conditions support diverse vegetation (USDA 2008).

Examples Include: Bucks Hollow (SI).

Recommended Plants:

Ferns

Athyrium felix-femina

Dennstaedtia punctilobula

Dryopteris carthusiana

Osmunda cinnamomea

Osmunda claytoniana

Lady fern

Hay-scented fern

Spinulose woodfern

Cinnamon fern

Interrupted fern

Graminoids

Carex blanda

Carex lupulina

Carex radiata

Carex rosea

Carex scoparia

Carex stipata

Carex swanii

Cinna arundinacea

Danthonia spicata

Glyceria obtusa

Juncus tenuis

Rhynchospora capitellata

Eastern woodland sedge

Hop sedge

Eastern star sedge

Rosy sedge

Pointed broom sedge

Awlfruit sedge

Swan's sedge

Stout woodreed

Poverty oatgrass

Coastal mannagrass

Path rush

Brownish beaksedge

Forbs

Ageratina altissima

Allium canadense

Bidens frondosa

Cryptotaenia canadensis

Decodon verticillatus

Eutrochium maculatum

Eupatorium perfoliatum

Eurybia divaricata

Geranium maculatum

Mitchella repens

Penthorum sedoides

Polygonum arifolium

Polygonum hydropiperoides

White snakeroot

Wild garlic

Beggarticks

Canada honewort

Swamp loostrife

Spotted Joe-pye weed

Boneset

White wood aster

Wild geranium

Partridge berry

Ditch stonecrop

Halberd-leaved tearthumb

Swamp smartweed

Polygonum sagittatum
Ranunculus arborvitus
Sanicula canadensis
Solidago caesia
Smilacina racemosa
Symphotrichum cordifolium
Symplocarpus foetidus
Triadenum virginianum
Thalictrum pubescens
Viola cucullata
Viola x primulifolia
Viola sororia

Arrowleaf tearthumb
Small-flowered crow-foot
Canada sanicle
Wreath goldenrod
False Solomon's seal
Blue wood aster
Skunk cabbage
Virginia marsh St. Johnswort
Tall meadow-rue
Marsh blue violet
Primrose-leaved violet
Common violet

Vines

Parthenocissus quinquefolia
Vitis labrusca
Vitis riparia

Virginia creeper
Fox grape
River grape

Shrubs

Chimaphila maculata
Clethra alnifolia
Cornus amomum
Corylus americana
Lindera benzoin
Pyrola rotundifolia
Rubus occidentalis
Rubus pensilvanicus
Rubus hispidus
Vaccinium corymbosum
Viburnum dentatum

Striped prince's pine
Sweet pepperbush
Silky dogwood
American hazel-nut
Spicebush
American wintergreen
Black raspberry
Pennsylvania blackberry
Bristly dewberry
Highbush blueberry
Arrowwood

Trees

Acer rubrum
Betula allegheniensis
Betula lenta
Carya ovata
Carya tomentosa
Diospyros virginiana
Fagus grandifolia
Juglans nigra
Liquidambar styraciflua
Liriodendron tulipifera
Populus tremuloides
Prunus serotina
Quercus alba

Red maple
Yellow birch
Black birch
Shagbark hickory
Mockernut hickory
Persimmon
American beech
Black walnut
Sweetgum
Tulip poplar
Quaking aspen
Black cherry
White oak

Quercus bicolor
Quercus coccinea
Quercus rubra
Ulmus americana

Swamp white oak
Scarlet oak
Red oak
American elm

RED-MAPLE HARDWOOD SWAMP

This broadly-defined community has the red maple (*Acer rubrum*) as the dominant canopy tree or as a co-dominant species with other mixed hardwoods. A common community throughout the five boroughs, it occurs in poorly drained depressions, usually on inorganic soils (Edinger et al 2002). The landscapes can vary in elevation and the amount of time they are flooded throughout the year.

Examples Include: Bronx Park (BX), Alley Pond (QU), Clay Pit Ponds (SI), Bloomingdale (SI).

Recommended Plants:

Ferns

<i>Athyrium felix-femina</i>	Lady fern
<i>Dryopteris carthusiana</i>	Spinulose woodfern
<i>Dryopteris cristata</i>	Crested woodfern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Osmunda regalis</i>	Royal fern
<i>Woodwardia areolata</i>	Netted chain fern

Graminoids

<i>Carex crinita</i>	Fringed sedge
<i>Carex debilis</i>	White-edge sedge
<i>Carex folliculata</i>	Northern long sedge
<i>Carex intumescens</i>	Bladder sedge
<i>Carex radiata</i>	Eastern star sedge
<i>Carex vulpinoidea</i>	Fox sedge
<i>Cinna arundinacea</i>	Stout woodreed
<i>Elymus riparius</i>	Riverbank wild rye
<i>Elymus virginicus</i>	Virginia wild rye
<i>Glyceria canadensis</i>	Rattlesnake mannagrass
<i>Glyceria obtusa</i>	Coastal mannagrass
<i>Glyceria striata</i>	Fowl mannagrass
<i>Juncus effuses</i>	Soft rush
<i>Leersia virginica</i>	White grass
<i>Scirpus atorvirens</i>	Green bulrush

Forbs

<i>Arisaema triphyllum</i>	Jack-in-the-Pulpit
<i>Bohmeria cylindrica</i>	False nettle
<i>Claytonia virginica</i>	Spring beauty
<i>Chelone glabra</i>	Turtlehead
<i>Erythronium americanum</i>	Trout lily
<i>Eupatorium dubium</i>	Three-nerved Joe-pye weed
<i>Eupatorium perfoliatum</i>	Boneset

Geum canadense
Impatiens capensis
Lilium superbum
Lobelia cardinalis
Lysimachia ciliata
Mimulus ringens
Saururus cernuus
Symplocarpus foetidus
Thalictrum pubescens
Uvularia sessilifolia

Vines

Clematis virginiana
Vitis labrusca
Vitis riparia

Shrubs

Cephalanthus occidentalis
Clethra alnifolia
Eubotrys racemosa
Ilex verticillata
Lindera benzoin
Lyonia lingustrina
Photinia floribunda
Photinia melanocarpa
Photinia pyrifolia
Rhododendron viscosum
Vaccinium corymbosum
Viburnum dentatum

Trees

Acer rubrum
Amelanchier canadensis
Betula nigra
Diospyros virginiana
Liquidambar styraciflua
Magnolia virginiana
Nyssa sylvatica
Platanus occidentalis
Quercus bicolor
Quercus palustris
Ulmus americana

White avens
Jewelweed
Turk's cap lily
Cardinal flower
Fringed loosestrife
Monkey flower
Lizard's tail
Skunk cabbage
Tall meadow-rue
Sessileleaf bellwort

Virgin's bower
Fox grape
River grape

Buttonbush
Sweet pepperbush
Fetterbush
Inkberry
Spicebush
Male-berry
Purple fruit chokeberry
Black chokeberry
Red chokeberry
Swamp azalea
Highbush blueberry
Arrowwood

Red maple
Canadian serviceberry
River birch
Persimmon
Sweetgum
Sweet-bay magnolia
Black tupelo
American sycamore
Swamp white oak
Pin oak
American elm

D. Upland Forest Communities

Upland forest communities are plant communities characterized by a tree canopy cover of at least 60%. The majority of the forests in the New York City area occur on moist, well-drained soils.

MIXED OAK-HICKORY FOREST

This hardwood forest occurs on well-drained sites with loam or sandy loam soils. These communities can be found on ridgetops, upper slopes, or south- or west-facing slopes in the coastal lowlands. The tree canopy cover is at least 60% with a moderate density of hickories mixed with a two or more species of oaks.

Examples Include: Pelham Bay-Hunter Island (BX), Prospect Park (BK), Inwood Hill (MN), Forest Park (QU), High Rock (SI).

Recommended Plants:

Ferns

Adiantum aleuticum

Asplenium platyneuron

Dennstaedtia punctilobula

Polypodium virginianum

Polystichum acrostichoides

Maidenhair fern

Ebony Spleenwort

Hay-scented fern

Common polypody

Christmas fern

Graminoids

Andropogon gerardii

Carex appalachica

Carex blanda

Carex communis

Carex pensylvanica

Carex swanii

Carex virescens

Danthonia compressa

Danthonia spicata

Deschampsia flexuosa

Dichanthelium latifolium

Elymus hystrix

Schizachyrium scoparium

Big bluestem

Appalachian sedge

Eastern woodland sedge

Fibrousroot sedge

Pennsylvania sedge

Swan's sedge

Ribbed sedge

Flattened oatgrass

Poverty oatgrass

Common hairgrass

Broadleaf rosette grass

Bottlebrush grass

Little bluestem

Forbs

Aquilegia canadensis

Arabis canadensis

Corydalis sempervirens

Eurybia divaricata

Fragaria virginiana

Wild columbine

Sicklepod

Rock harlequin

White wood aster

Wild strawberry

Helianthus divaricatus
Ionactis linariifolius
Lespedeza hirta
Lysimachia quadrifolia
Monarda fistulosa
Ozmorhiza claytonii
Pycnanthemum incanum
Silene stellata
Solidago bicolor
Solidago caesia
Symphotrichum cordifolium
Thalictrum dioicum
Verbena urticifolia

Shrubs

Comptonia peregrina
Gaylussacia baccata
Gaylussacia frondosa
Hamamelis virginiana
Kalmia latifolia
Rhododendron periclymenoides
Rhus glabra
Rhus typhina
Rosa virginiana
Rubus allegheniensis
Rubus flagellaris
Rubus idaeus
Rubus odoratus
Vaccinium angustifolium
Vaccinium corymbosum
Vaccinium pallidum
Vaccinium stamineum
Viburnum acerifolium
Viburnum prunifolium

Trees

Acer rubrum
Acer saccharum
Amelanchier arborea
Betula lenta
Betula populifolia
Carya glabra
Carya cordiformis
Carya ovata
Carya tomentosa

Woodland sunflower
Flaxleaf whitetop aster
Hairy bush clover
Whorled loostrike
Wild bergamot
Sweet cicely
Hoary mountain mint
Starry campion
White goldenrod
Wreath goldenrod
Blue wood aster
Early meadow-rue
White vervain

Sweetfern
Black huckleberry
Tall huckleberry
Witch hazel
Mountain laurel
Pinkster azalea
Smooth sumac
Staghorn sumac
Virginia rose
Common blackberry
Dewberry
Red raspberry
Purple-flowered raspberry
Lowbush blueberry
Highbush blueberry
Early low blueberry
Deerberry
Maple-leaved viburnum
Black-haw

Red maple
Sugar maple
Common serviceberry
Black birch
Gray birch
Pignut hickory
Bitternut hickory
Shagbark hickory
Mockernut hickory

Cornus florida
Liriodendron tulipifera
Ostrya virginiana
Pinus strobus
Prunus serotina
Prunus virginiana
Quercus alba
Quercus coccinea
Quercus ilicifolia
Quercus marilandica
Quercus prinus
Quercus rubra
Quercus velutina
Tilia americana

Flowering dogwood
Tulip poplar
Hop hornbeam
Eastern white pine
Black cherry
Common chokecherry
White oak
Scarlet oak
Bear oak
Blackjack oak
Chestnut oak
Red oak
Black oak
American linden

RICH MESOPHYTIC FOREST

This diverse mixed forest is home to some of New York City's most stunning plant communities. The rich, seasonally-moist, well-drained soils are favorable to spring ephemerals and the culturally significant sugar maple (*Acer saccharum*). The acidic qualities of the soils are maintained by the variety of occurring oak species.

Examples Include: Van Cortlandt (BX), Inwood Hill (MN), Cunningham (QU), Bloodroot Valley (SI).

Recommended Plants:

Ferns

<i>Athyrium felix-femina</i>	Lady fern
<i>Deparia arcrostichoides</i>	Silvery glade fern
<i>Dryopteris marginalis</i>	Marginal woodfern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda claytoniana</i>	Interrupted fern
<i>Polystichum acrostichoides</i>	Christmas fern
<i>Thelypteris novaboracensis</i>	New York fern

Graminoids

<i>Carex swanii</i>	Swan's sedge
<i>Carex radiata</i>	Eastern star sedge
<i>Carex rosea</i>	Rosy sedge
<i>Juncus tenuis</i>	Path rush
<i>Leersia virginica</i>	White grass
<i>Luzula multiflora</i>	Common wood-rush

Forbs

<i>Actaea pachypoda</i>	Doll's eyes
<i>Actaea racemosa</i>	Black cohosh
<i>Ageratina altissima</i>	White snakeroot
<i>Allium tricoccum</i>	Wild leek
<i>Anemone quinquefolia</i>	Wood anemone
<i>Aralia nudicaulis</i>	Wild sarsaparilla
<i>Aralia racemosa</i>	American spikenard
<i>Asarum canadense</i>	Wild ginger
<i>Caulophyllum thalictroides</i>	Blue cohosh
<i>Dicentra cucullaria</i>	Dutchman's breeches
<i>Eurochium purpureum</i>	Sweet Joe-pye weed
<i>Geranium maculatum</i>	Wild geranium
<i>Helianthus decapetalus</i>	Thin-leaved sunflower
<i>Impatiens capensis</i>	Jewelweed
<i>Maianthemum canadense</i>	Canada mayflower
<i>Mitchella repens</i>	Partridge berry
<i>Podophyllum peltatum</i>	Mayapple

Polygonatum biflorum
Polygonatum pubescens
Polygonum virginianum
Rubus odoratus
Sanguinaria canadensis
Smilacina racemosa
Thalictrum pubescens
Viola pubescens
Viola sororia

Smooth Solomon's seal
Hairy Solomon's seal
Jumpseed
Purple-flowered raspberry
Bloodroot
False solomon's seal
Tall meadow-rue
Yellow forest violet
Common violet

Vines

Lonicera sempervirens
Vitis aestivalis

Trumpet honeysuckle
Summer grape

Shrubs

Corylus americana
Euonymus americanus
Lindera benzoin
Hamamelis virginiana
Rhododendron periclymenoides
Staphylea trifolia
Vaccinium corymbosum
Viburnum acerifolium
Viburnum dentatum
Viburnum prunifolium

American hazel-nut
Strawberry bush
Spicebush
Witch hazel
Pinkster azalea
Bladder-nut
Highbush blueberry
Maple-leaved viburnum
Arrowwood
Black-haw

Trees

Acer rubrum
Acer saccharum
Amelanchier canadensis
Betula lenta
Carpinus caroliniana
Carya ovata
Cornus florida
Juglans nigra
Liquidambar styraciflua
Liriodendron tulipifera
Nyssa sylvatica
Platanus occidentalis
Prunus serotina
Quercus alba
Quercus coccinea
Quercus palustris
Quercus rubra
Quercus velutina

Red maple
Sugar maple
Canadian serviceberry
Black birch
American hornbeam
Shagbark hickory
Flowering dogwood
Black walnut
Sweetgum
Tulip poplar
Black tupelo
American sycamore
Black cherry
White oak
Scarlet oak
Pin oak
Red oak
Black oak

Sassafras albidum
Tilia americana

Sassafras
American linden

SUCCESSIONAL MIXED HARDWOODS

Succession is a natural process that occurs on the landscape after a major disturbance such as farming, logging, fire or flood. This never-ending process is shaped by the environment of the site and the species available in the natural seed bank or by seed dispersal. A successional mixed hardwood forest is dominated by pioneer tree species such as poplars, birches, maples, and cherries. These wind-dispersed, sun-loving species grow fast and will colonize a disturbed area. As the canopy closes, more shade tolerant species will move into the understory and tree seedlings of the climax forest, such as oak or hickory, may appear.

Examples Include: Seton Falls (BX), Prospect Park (BK), Central Park (MN), Kissena Park (QU), Heyerdale Hill (SI).

Recommended Plants:

Ferns

<i>Dennstaedtia punctilobula</i>	Hay-scented fern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern

Graminoids

<i>Carex blanda</i>	Eastern woodland sedge
<i>Carex rosea</i>	Rosy sedge
<i>Cinna arundinacea</i>	Stout woodreed
<i>Dichanthelium clandestinum</i>	Deertongue
<i>Luzula multiflora</i>	Common wood-rush
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluesstem
<i>Sorghastrum nutans</i>	Indian grass

Forbs

<i>Ageratina altissima</i>	White snakeroot
<i>Cryptotaenia canadensis</i>	Canada honewort
<i>Desmodium paniculatum</i>	Panicled tick-trefoil
<i>Eurtrochium purpureum</i>	Sweet Joe-pye weed
<i>Helianthus decapetalus</i>	Thin-leaved sunflower
<i>Impatiens capensis</i>	Jewelweed
<i>Smilacina racemosa</i>	False Solomon's seal
<i>Penthorum sedodies</i>	Ditch stonecrop

Vines

<i>Lonicera sempervirens</i>	Trumpet honeysuckle
<i>Vitis aestivalis</i>	Summer grape
<i>Vitis vulpina</i>	Frost grape

Shrubs

<i>Clethra alnifolia</i>	Sweet pepperbush
<i>Cornus amomum</i>	Silky dogwood
<i>Cornus racemosa</i>	Gray dogwood
<i>Gaylussacia baccata</i>	Black huckleberry
<i>Gaylussacia frondosa</i>	Tall huckleberry
<i>Hamamelis virginiana</i>	Witch hazel
<i>Lindera benzoin</i>	Spicebush
<i>Rhododendron periclymenoides</i>	Pinkster azalea
<i>Rhus glabra</i>	Smooth sumac
<i>Rhus typhina</i>	Staghorn sumac
<i>Rubus allegheniensis</i>	Common blackberry
<i>Rubus idaeus</i>	Red raspberry
<i>Rubus occidentalis</i>	Black raspberry
<i>Rubus pensilvanicus</i>	Pennsylvania blackberry
<i>Sambucus canadensis</i>	Elderberry
<i>Vaccinium angustifolium</i>	Lowbush blueberry
<i>Vaccinium pallidum</i>	Early low blueberry
<i>Viburnum acerifolium</i>	Maple-leaved blueberry
<i>Viburnum dentatum</i>	Arrowwood

Trees

<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Amelanchier arborea</i>	Common serviceberry
<i>Amelanchier canadensis</i>	Canadian serviceberry
<i>Betula lenta</i>	Black birch
<i>Betula populifolia</i>	Grey birch
<i>Celtis occidentalis</i>	Common hackberry
<i>Fagus grandifolia</i>	American beech
<i>Ilex opaca</i>	American holly
<i>Juniperus virginiana</i>	Eastern red cedar
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Liriodendron tulipifera</i>	Tulip poplar
<i>Populus deltoides</i>	Cottonwood
<i>Populus grandidentata</i>	Bigtooth aspen
<i>Populus tremuloides</i>	Quaking aspen
<i>Prunus serotina</i>	Black cherry
<i>Sassafras albidum</i>	Sassafras

OAK-TULIP TREE FOREST

This mesophytic forest is a mixture of hardwoods and softwoods. The dominant species of oak and tulip poplar are usually joined by the black birch, beech or red maple. Moist, well-drained soils will support a diverse understory of shrubs and herbaceous flora. Tulip poplars, with their very straight trunks, can reach over 100 feet tall. Their magnificent form helps to bring a natural giant to the famed New York City skyline.

Examples Include: Pelham Bay-Hunter Island (BX), Prospect Park (BK), Inwood Hill (MN), Forest Park (QU), Bloomingdale (SI).

Recommended Plants:

Ferns

Athyrium felix-femina

Lady fern

Deparia acrostichoides

Silvery glade fern

Thelypteris novaboracensis

New York fern

Graminoids

Carex blanda

Eastern woodland sedge

Carex rosea

Rosy sedge

Carex swanii

Swan's sedge

Danthonia spicata

Poverty oatgrass

Dichanthelium clandestinum

Deertongue

Juncus tenuis

Path rush

Forbs

Actaea racemosa

Black cohosh

Anemone quinquefolia

Wood anemone

Aralia racemosa

American spikenard

Arisaema triphyllum

Jack-in-the-Pulpit

Eurybia divaricata

White wood aster

Geranium maculatum

Wild geranium

Helianthus decapetalus

Thin-leaved sunflower

Mainanthemum canadense

Canada mayflower

Mitchella repens

Partridge berry

Polygonatum biflorum

Smooth Solomon's seal

Polygonatum pubescens

Hairy Solomon's seal

Smilacina racemosa

False Solomon's seal

Symplocarpus foetidus

Skunk cabbage

Uvularia sessilifolia

Sessileleaf bellwort

Viola x primulifolia

Primrose-leaved violet

Viola sororia

Common violet

Vines

Parthenocissus quinquefolia
Vitis aestivalis

Virginia creeper
Summer grape

Shrubs

Hamamelis virginiana
Pyrola rotundifolia
Rubus occidentalis
Rubus pensilvanicus
Vaccinium angustifolium
Vaccinium pallidum
Viburnum acerifolium
Viburnum prunifolium

Witch hazel
American wintergreen
Black raspberry
Pennsylvania blackberry
Lowbush blueberry
Early low blueberry
Maple-leaved viburnum
Black-haw

Trees

Acer rubrum
Betula lenta
Cornus florida
Fagus grandifolia
Liriodendron tulipifera
Prunus serotina
Quercus alba
Quercus coccinea
Quercus rubra
Quercus velutina
Sassafras albidum

Red maple
Black birch
Flowering dogwood
American beech
Tulip poplar
Black cherry
White oak
Scarlet oak
Red oak
Black oak
Sassafras

CHESTNUT OAK FOREST

This hardwood forest that occurs on the coastal plain is situated on well-drained sites. The canopy is limited to two or three oak species and red maples. Historically, the American chestnut thrived in these habitats until the chestnut blight decimated the populations. American chestnut sprouts can still be found in the understory today. The understory will consist of ericaceous shrubs such as black huckleberry (*Gaylussacia baccata*) and blueberry (*Vaccinium pallidum*).

Examples Include: Van Cortlandt Park (BX), Forest Park (QU), Deere Park (SI).

Recommended Plants:

Ferns

Asplenium platyneuron

Ebony Spleenwort

Osmunda claytoniana

Interrupted fern

Thelypteris novaboracensis

New York fern

Graminoids

Carex pensylvanica

Pennsylvania sedge

Carex swanii

Swan's sedge

Forbs

Eurybia divaricata

White wood aster

Prenanthes trifoliata

Gall-of-the-Earth

Shrubs

Gaylussacia baccata

Black huckleberry

Hamamelis virginiana

Witch hazel

Kalmia latifolia

Mountain laurel

Morella pensylvanica

Northern bayberry

Rhododendron periclymenoides

Pinkster azalea

Vaccinium corymbosum

Highbush blueberry

Vaccinium pallidum

Early low blueberry

Vaccinium stamineum

Deerberry

Viburnum acerifolium

Maple-leaved viburnum

Trees

Liriodendron tulipifera

Tulip poplar

Prunus serotina

Black cherry

Quercus alba

White oak

Quercus prinus

Chestnut oak

Quercus rubra

Red oak

Quercus velutina

Black oak

Sassafras albidum

Sassafras

MARITIME OAK FOREST

This oak-dominated forest is in general proximity of a marine community such as a salt marsh or the edge of a back dune. These plant communities are heavily influenced by the coastal processes including salt spray, high winds, flooding and sand deposition. The canopy may be stunted due to these processes and the understory will be thick with a dense shrub layer and vines.

Examples Include: Pelham Bay Park-Hunter Island (BX), Paerdegat Preserve (BK), Conference House (SI), Clay Pit Ponds (SI).

Recommended Plants:

Ferns

Pteridium aquilinum

Bracken fern

Graminoids

Carex annectens

Yellow-fruit sedge

Carex albicans var. emonsii

Emmons Sedge

Chasmanthium laxum

Slender woodoats

Carex pensylvanica

Pennsylvania sedge

Danthonia compressa

Flattened oatgrass

Danthonia spicata

Poverty oatgrass

Deschampsia flexuosa

Common hairgrass

Forbs

Baptisia tinctoria

Yellow wild indigo

Helianthemum canadense

Longbranch frostweed

Hieracium venosum

Rattlesnake weed

Hypericum hypercoides

St. Andrew's cross

Lechea mucronata

Pinweed

Lespedeza capitata

Round-headed bush-clover

Lespedeza hirta

Hairy bush clover

Tephrosia virginiana

Virginia tephrosia

Trichostema dichotomum

Forked blue curls

Vines

Parthenocissus quinquefolia

Virginia creeper

Vitis vulpina

Frost grape

Shrubs

Arctostaphylos uva-ursi

Bearberry

Comptonia peregrina

Sweetfern

Epigaea repens

Trailing arbutus

Gaultheria procumbens

Eastern teaberry

Gaylussacia baccata

Black huckleberry

Gaylussacia frondosa
Kalmia angustifolia
Kalmia latifolia
Ilex glabra
Vaccinium angustifolium
Vaccinium corymbosum
Vaccinium pallidum

Tall huckleberry
Sheep laurel
Mountain laurel
Inkberry
Lowbush blueberry
Highbush blueberry
Early low blueberry

Trees

Acer rubrum
Betula populifolia
Diospyros virginiana
Magnolia virginiana
Nyssa sylvatica
Pinus echinata
Pinus rigida
Pinus virginiana
Quercus alba
Quercus prinus
Quercus velutina
Sassafras albidum

Acer rubrum
Gray birch
Persimmon
Sweet-bay magnolia
Black tupelo
Shortleaf pine
Pitch pine
Virginia pine
White oak
Chestnut oak
Black oak
Sassafras

SUCCESSIONAL MARITIME OAK FOREST

A maritime forest will naturally succeed a maritime shrubland if it is left undisturbed. A minimal amount of herbaceous material at ground-level will be able to survive. The dense shrub layer, with a closing canopy, will shade out many of the herbaceous species.

Examples Include: Pelham Bay Park-Hunter Island (BX), Paerdegat Preserve (BK), Idlewild Park (QU), Saw Mill Creek (SI).

Recommended Plants:

Ferns

Pteridium aquilinum

Bracken fern

Graminoids

Andropogon gerardii

Big bluestem

Aristida dichotoma

Churchmouse threeawn

Aristida tuberculosa

Seaside threeawn

Agrostis perennans

Autumn bent-grass

Carex pensylvanica

Pennsylvania sedge

Eragrostis spectabilis

Purple lovegrass

Panicum virgatum

Switchgrass

Schizachyrium scoparium

Little bluestem

Forbs

Agalinus purpurea

Purple false foxglove

Baptisia tinctoria

Yellow wild indigo

Chrysopsis mariana

Maryland goldenaster

Eupatorium album

White boneset

Lespedeza capitata

Round-headed bush-clover

Nuttallanthus canadensis

Blue toadflax

Plantago aristata

Largebracted plantain

Solidago odora

Sweet goldenrod

Tephrosia virginiana

Virginia tephrosia

Trichostema dichotomum

Forked blue curls

Vines

Parthenocissus quinquefolia

Virginia creeper

Vitis vulpina

Frost grape

Shrubs

Arctostaphylos uva-ursi

Bearberry

Comptonia peregrina

Sweetfern

Hudsonia ericoides

Heather

Gaylussacia baccata

Black huckleberry

Gaylussacia frondosa
Ilex glabra
Lyonia mariana
Rhus copallina
Rubus hispidus
Vaccinium angustifolium
Vaccinium pallidum

Tall huckleberry
Inkberry
Staggerbush
Winged sumac
Bristly dewberry
Lowbush blueberry
Early low blueberry

Trees

Acer rubrum
Quercus ilicifolia
Quercus marilandica
Quercus prinoides
Quercus stellata
Sassafras albidum

Red maple
Bear oak
Blackjack oak
Dwarf chestnut oak
Post oak
Sassafras

E. Urban Plant Communities

Urban plant communities are those that occur in developed, landscaped, or built up areas. They occur on a wide variety of soils, and are the most frequently encountered plant community for most people.

The palette of our natural plant communities can be used to help select the right plant species for the right urban place. Understanding the conditions that these plants naturally occur in will reveal the compatibility of a particular species to a projects site conditions.

- **Urban Landscapes**

Urban landscapes can be some of the most challenging sites to work within. Many times this type of landscape becomes an excuse to use the same tried and true palette of plants because “nothing else will grow there”. In reality, many native pioneer species have found and will thrive in abandoned lots and rail lines, cracks in the concrete and roadsides.

- Many of the species found in the *Successional Communities - Old Fields and Urban Lots*, are the ideal species to consider for challenging sites. Designers should consider these species for many types of urban parks. For more natural areas, straight species are preferred, but there are many commercially available cultivars of these species for more manicured areas, to meet habitat and aesthetic goals. Many of these species are successful in phyto-remediation.
- Poor soils with low nutrients, or other soils with high content of magnesium or other metals, where remediation or restoration is not possible or desired, can be a difficult site to work with. Plants from the *Serpentine Barrens* community may be appropriate, given their adaptations to thrive in low-nutrient soils close to bedrock. Their native soil conditions are only found on Staten Island, however, these plants can be considered for use in other disturbed soils.
- For new parks or sites with minimal canopy, *Successional Mixed Hardwoods* provide a range of species that are hardy, establish quickly and tolerate a range of soils. Creating the proper framework for your desired climax habitats is the necessary first step for the long term sustainability of a healthy ecosystem.

- **Established Parks**

Many established parks have a dense tree canopy that can limit the amount of sun and nutrients that reach the forest floor. In projects where understory species are being expanded and green space increased, there are a range of opportunities to increase species diversity and habitat value. Knowing the habitat your project is situated within can help guide you to species that will be suitable for the existing conditions.

- In openings in the established canopy that are being expanded into planting beds, the species of the *Oak Opening* community would be appropriate and most beneficial to the fauna traveling in between the fragmented forest.
- In areas within the established canopy, the species of *Rich Mesophytic Forest*, *Oak-Tulip Tree Forest* and *Chesnut Oak Forest* are well suited to topsoil specified in Parks projects and provide a wide range of understory and herbaceous diversity.
- For areas with greater salt exposure, species from *Maritime Oak Forest* and *Successional Maritime Oak Forest* may be well suited, though this community is dominated by a shrub layer and offers few herbaceous selections.
- For greater drought tolerance, *Mixed Oak-Hickory Forest* species have adapted well to shallow soils, low water and exposure.

- **Green Infrastructure :**

Green Infrastructure sites place specific demands on the species used within them. A tolerance of large volumes of water is an obvious one, but this is coupled with periods of drought amplified by the well-draining sandy soil used in these installations. Sediment and road salt are found within the runoff directed towards these plants as well. When used in the right-of-way, there are often limitations placed on maximum heights, due to the need to maintain site lines. Overall, these specific criteria translate to a select group of plants that are well-suited to thrive in this environment. When the right plant is used, they can be quite successful.

- *Floodplain Forest*, *Bottomland Forest*, *Red-Maple Hardwood Swamp* and *Wetland Communities* can provide a range of suitable species for green infrastructure projects, though attention to the salt and drought tolerance of individual species should be considered. These species are best used in the lowest areas of rain gardens that will receive the most runoff. Many of these companion plants offer quality resources for pollinator habitat throughout every season
- *Maritime communities* are often a good starting point for urban green infrastructure sites, due to their tolerance of salts, high sand content in soils and saturated soils. Take note that green infrastructure site can also be dry during non-rainy seasons, and so plants selected should also have a range of drought tolerance.
- *Shrub Swamp* and *Successional Shrubland* offer a range of species that tolerate seasonal fluctuations in soil moisture, making them ideally suited to rain gardens and other stormwater capture installations. *Successional Shrubland* species often exhibit greater urban tolerance, and so are especially suited to road runoff projects.

- Grasses and herbaceous species from *Mixed Oak-Hickory Forest and Maritime Grasslands* communities work well on green roofs, due to their tolerance of winds, shallow soils and drought.
- **Cultural Communities:**

Cultural communities are either created or maintained by human activities. Many of our urban disturbed areas were once fill or dump sites that drastically changed the soil makeup, permeability, and the natural plant communities that once existed there. Reforestation and restoration claim a unique definition in a densely populated city and require plant species that must thrive in areas with low nutrient levels, low permeability, a minimal amount of organic matter, and high salinity levels resulting from urban fill and runoff.

 - **WETLANDS:** Many of New York City's shallow and deep emergent marshes have been invaded by Phragmites, the common reed grass, or purple loosestrife. Restoration in these high nutrient, fill/dump wetlands is a long-term process and requires multiple methods. A number of native plant species can be gradually introduced during the treatment process to help colonize newly disturbed land, remediate the soil, and compete with the aggressive invasives.

Recommended Plants:

Graminoids

<i>Carex atlantica</i>	Prickly bog sedge
<i>Carex crinita</i>	Fringed sedge
<i>Carex stricta</i>	Tussock sedge
<i>Juncus canadensis</i>	Canadian rush
<i>Juncus effusus</i>	Soft rush
<i>Panicum virgatum</i>	Switchgrass
<i>Scirpus cyperinus</i>	Wool grass
<i>Schoenoplectus tabernaemontani</i>	Soft stem bulrush
<i>Tripsacum dactyloides</i>	Eastern gamagrass

Forbs

<i>Decodon verticillatus</i>	Swamp loostrife
<i>Hibiscus moscheutos</i>	Rose-mallow
<i>Solidago rugosa</i>	Wrinkleleaf goldenrod

Vines

<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Vitis labrusca</i>	Fox grape
<i>Vitis riparia</i>	River grape

Shrubs

<i>Baccharis halmifolia</i>	Groundsel bush
<i>Cephalanthus occidentalis</i>	Buttonbush

Iva frutescens
Rubus pensilvanicus
Sambucus canadensis

Marsh elder
Pennsylvania blackberry
Elderberry

- *STREET TREES* have become part of the fabric of New York City. A tree-lined street improves the overall health of a neighborhood and helps to beautify a concrete landscape. The conditions that street trees grow in are harsh and although the design of tree pits are improving, there are critical characteristics that a species must have to survive. Trees on the roadside have to endure salt spray and drought conditions. The open surface area on the ground that is permeable to water is limited in a tree pit, but with the addition of planted herbs and grasses, soil and moisture will be retained in the pit. Even trees that have a larger surface area of lawn, in a median or a Greenstreet, will still benefit from being drought tolerant considering the runoff that occurs and the contained planting bed.

Examples Include: Numerous streets throughout the city.

Recommended Plants:

Graminoids

Carex blanda
Eragrostis spectabilis
Juncus tenuis
Panicum virgatum
Schizachyrium scoparium

Eastern woodland sedge
Purple lovegrass
Path rush
Switchgrass
Little bluestem

Forbs

Ageratina altissima
Asclepias syriaca
Geum canadense
Oenothera biennis
Solidago sempervirens
Symphotrichum pilosum

White snakeroot
Common milkweed
White avens
Common evening primrose
Seaside goldenrod
Hairy white oldfield aster

Shrubs

Gaylussacia baccata
Ilex glabra
Morella pensylvanica
Photinia pyrifolia
Prunus maritima
Rhus copallina
Rhus glabra
Rhus typhina

Black huckleberry
Inkberry
Northern bayberry
Red chokeberry
Beach plum
Winged sumac
Smooth sumac
Staghorn sumac

Rosa carolina
Rosa virginiana
Sambucus canadensis
Vaccinium angustifolium
Viburnum dentatum

Pasture rose
Virginia rose
Elderberry
Lowbush blueberry
Arrowwood

Trees

Amelanchier arborea
Betula populifolia
Carpinus caroliniana
Celtis occidentalis
Nyssa sylvatica
Populus deltoides
Prunus serotina
Quercus alba
Quercus bicolor
Quercus coccinea
Quercus palustris
Quercus phellos
Quercus prinus
Quercus rubra
Quercus stellata
Quercus velutina

Common serviceberry
Grey birch
American hornbeam
Common hackberry
Black tupelo
Cottonwood
Black cherry
White oak
Swamp white oak
Scarlet oak
Pin oak
Willow oak
Chestnut oak
Red oak
Post oak
Black oak

- *TREE LAWNS* can be considered high maintenance due to the amount of fertilizer, water and mowing required to keep them aesthetically pleasing. Incorporating perennial layers in a naturalized design will help cut costs and improve the habitat value of the landscape.

Examples Include: Numerous streets and parkways throughout the city.

Recommended Plants:

Ferns

<i>Dennstaedtia punctilobula</i>	Hay-scented fern
<i>Polystichum acrostichoides</i>	Christmas fern
<i>Pteridium aquilinum</i>	Bracken fern

Graminoids

<i>Andropogon virginicus</i>	Broom-sedge
<i>Carex blanda</i>	Eastern woodland sedge
<i>Carex pensylvanica</i>	Pennsylvania sedge
<i>Deschampsia flexuosa</i>	Common hairgrass
<i>Elymus canadensis</i>	Canada wild rye
<i>Elymus hystrix</i>	Bottlebrush grass
<i>Eragrostis spectabilis</i>	Purple lovegrass
<i>Juncus tenuis</i>	Path rush
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Sorghastrum nutans</i>	Indian grass
<i>Spartina pectinata</i>	Prairie cordgrass
<i>Tridens flavus</i>	Purpletop

Forbs

<i>Ageratina altissima</i>	White snakeroot
<i>Asclepias incarnata</i>	Swamp milkweed
<i>Asclepias tuberosa</i>	Butterfly weed
<i>Baptisia tinctoria</i>	Yellow wild indigo
<i>Chrysopsis mariana</i>	Maryland goldenaster
<i>Euthamia caroliniana</i>	Slender goldentop
<i>Euthamia graminifolia</i>	Lance-leaved goldenrod
<i>Eutrochium purpureum</i>	Sweet Joe-pye weed
<i>Helianthus divaricatus</i>	Woodland sunflower
<i>Ionactis linariifolius</i>	Flaxleaf whitetop aster
<i>Lobelia siphilitica</i>	Great lobelia
<i>Monarda fistulosa</i>	Wild bergamot
<i>Oenothera biennis</i>	Common evening primrose
<i>Pityopsis falcata</i>	Atlantic golden aster
<i>Potentilla canadensis</i>	Dwarf cinquefoil
<i>Potentilla simplex</i>	Common cinquefoil

<i>Solidago canadensis</i>	Canada goldenrod
<i>Solidago nemoralis</i>	Gray goldenrod
<i>Solidago odora</i>	Sweet goldenrod
<i>Solidago rugosa</i>	Wrinkleleaf goldenrod
<i>Solidago sempervirens</i>	Seaside goldenrod
<i>Solidago speciosa</i>	Showy goldenrod
<i>Symphotrichum ericoides</i>	White heath aster

Vines

<i>Clematis virginiana</i>	Virgin's bower
<i>Lonicera sempervirens</i>	Trumpet honeysuckle
<i>Parthenocissus quinquefolia</i>	Virginia creeper

Shrubs

<i>Alnus serrulata</i>	Common alder
<i>Arctostaphylos uva-ursi</i>	Bearberry
<i>Comptonia peregrina</i>	Sweetfern
<i>Cornus racemosa</i>	Grey dogwood
<i>Corylus americana</i>	American hazel-nut
<i>Gaultheria procumbens</i>	Eastern teaberry
<i>Gaylussacia baccata</i>	Black huckleberry
<i>Ilex glabra</i>	Inkberry
<i>Kalmia angustifolia</i>	Sheep laurel
<i>Kalmia latifolia</i>	Mountain laurel
<i>Lyonia mariana</i>	Staggerbush
<i>Morella pensylvanica</i>	Northern bayberry
<i>Photinia pyrifolia</i>	Red chokeberry
<i>Prunus maritima</i>	Beach plum
<i>Quercus ilicifolia</i>	Bear oak
<i>Quercus prinoides</i>	Dwarf chestnut oak
<i>Rhus aromatica</i>	Fragrant sumac
<i>Rhus copallina</i>	Winged sumac
<i>Rhus glabra</i>	Smooth sumac
<i>Rhus typhina</i>	Staghorn sumac
<i>Rosa carolina</i>	Pasture rose
<i>Rosa virginiana</i>	Virginia rose
<i>Rubus allegheniensis</i>	Common blackberry
<i>Rubus occidentalis</i>	Black raspberry
<i>Sambucus canadensis</i>	Elderberry
<i>Spiraea alba var. latifolia</i>	Meadowssweet
<i>Spiraea tomentosa</i>	Hardhack
<i>Vaccinium angustifolium</i>	Lowbush blueberry
<i>Vaccinium pallidum</i>	Low early blueberry
<i>Viburnum dentatum</i>	Arrowwood
<i>Viburnum lentago</i>	Nanny-berry

Trees

<i>Acer rubrum</i>	Red maple
<i>Acer saccharum</i>	Sugar maple
<i>Amelanchier arborea</i>	Common serviceberry
<i>Betula populifolia</i>	Grey birch
<i>Carpinus caroliniana</i>	American hornbeam
<i>Carya glabra</i>	Pignut hickory
<i>Carya ovata</i>	Shagbark hickory
<i>Carya tomentosa</i>	Mockernut hickory
<i>Celtis occidentalis</i>	Common hackberry
<i>Diospyros virginiana</i>	Persimmon
<i>Juniperus virginiana</i>	Eastern red cedar
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Liriodendron tulipifera</i>	Tulip poplar
<i>Nyssa sylvatica</i>	Black tupelo
<i>Ostrya virginiana</i>	Hop hornbeam
<i>Pinus echinata</i>	Shortleaf pine
<i>Pinus rigida</i>	Pitch pine
<i>Pinus virginiana</i>	Virginia pine
<i>Platanus occidentalis</i>	American sycamore
<i>Populus deltoides</i>	Cottonwood
<i>Populus grandidentata</i>	Bigtooth aspen
<i>Populus tremuloides</i>	Quaking aspen
<i>Prunus serotina</i>	Black cherry
<i>Quercus alba</i>	White oak
<i>Quercus bicolor</i>	Swamp white oak
<i>Quercus coccinea</i>	Scarlet oak
<i>Quercus palustris</i>	Pin oak
<i>Quercus phellos</i>	Willow oak
<i>Quercus prinus</i>	Chestnut oak
<i>Quercus rubra</i>	Red oak
<i>Quercus velutina</i>	Black oak

Plant Descriptions

Successful plant communities are usually composed of a combination of various woody and herbaceous species. Proportions of each species characterize the various ecological communities described in the guide. For instance, trees are largely absent from coastal dune communities, but form the dominant vegetation in bottomland forest. Effective planting strategies can be based on supplementing existing vegetation to replicate these communities, depending on careful analysis of soils, light conditions, and hydrologic resources. Carefully consider the mature sizes of specified plants to best determine the appropriate spacing.

Following are descriptions of the many native species suitable for planting in New York City. There are several variables listed for each species, based on the research completed and available at time of publication. Some plants are more well-studied than others, and as a result, for certain species, there may be information that is simply not known.

Some of the information presented is technical in nature and to assist the reader the following tables are provided to clarify the data.

Wetland Indicator Status:

- OBL = >99% probability, plants always found in wet soil or standing water.
- FACW = 67-99% probability, plants usually found in wet to moist soil.
- FAC = 34-66% probability, plants occurring in both wetlands and moist upland soil.
- FACU = 1-33% probability, plants sometimes occur in wetlands and tolerate moist to dry soil.
- UPL = 0% probability, plants that almost never occur in wetlands and tolerate dry soil.
- NI=No Indicator.

Salt Tolerance Level

Explanation

Moderate salt tolerance

The plant can tolerate some salt, but does not necessarily do well in a coastal flood. If the plant is ever inundated with salt water, thoroughly rinse it with fresh water as soon as possible.

High salt tolerance

The plant lives in/very close to salt water and can tolerate being flooded with salt water either occasionally or all the time.

Soil pH

<3.0
3.01 – 4.0
4.01 – 5.5
5.51 to 6.8
6.81 – 7.2
7.21 – 7.5
7.51 – 8.5
>8.5

Soil Category

Severely acidic
Strongly acidic
Moderately acidic
Slightly acidic (optimum for many plants)
Near neutral (optimum for many plants)
Slightly alkaline (optimum for many plants)
Moderately alkaline
Strongly alkaline

Shade Tolerance Class

Very intolerant
Intolerant
Moderately tolerant
Tolerant
Very tolerant

Percentage of Full Sunlight Needed During Growing Season

>50%
25 – 50%
10 – 25%
5 – 10%
2 – 5%

Drought tolerance level

Low drought tolerance
Moderate drought tolerance
Drought tolerant

Explanation

The plant needs moist soil to thrive and/or survive.
The plant generally needs moist soils, but can survive short periods without water.
The plant does not need additional water once it is established.

Flood Tolerance

Very intolerant
Intolerant
Moderately tolerant
Tolerant

Length of Flood Conditions during growing season

A few days.
1 – 2 weeks.
30 consecutive days.
One full growing season.

Urban Tolerance

Tolerant of concrete debris

The plant can grow in soil containing up to 30% concrete debris.

Tolerant of fill soils

This plant can tolerate man-made soils such as construction debris or dredge spoil.

Low anaerobic tolerance

This plant cannot tolerate low/no oxygen conditions such as compaction or flooding.

Performs well in the right of way

This plant tolerates stormwater, and is suitable for use in bioswales, greenstreets, and other urban stormwater applications.

Trees:

Trees are the dominant landscape elements and perform a number of functions in a park setting. Give consideration to the mature size of species specified, as well the ornamental qualities of fruit, form, bark, floral display, and fall color.

Acer negundo

Boxelder

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	pH 6.5-7.5
Form/Color	Woody wetland tree, grows from 35' to 50', 35' to 50' spread, yellow green to lime green in mid April, green to tan brown fruit in July-September, fast grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Resistant of soil compaction and demolition debris, pollution tolerant, intolerant of shade.
Habitat:	Forest, lowland wet, river channel, lake edge, floodplain depressions, wet ravines, roadsides.	Ecosystem Services:	Seeds, buds, flowers eaten by songbirds, waterbirds, small and large mammals.		
Hydrology:	Tolerant of drought, flooding, saturated soil 75% of growing season.				
Ornamental Value:	Odd pinnate compound leaves with larger yellow samaras.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:	Host of the Asian longhorn beetle and boxelder bug, may be poisonous to livestock; light and soft wood; short lifespan.		
Shade Tolerance:	Intolerant of shade.				

Acer rubrum

Red Maple

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.5-7.0
Form/Color	75' to 100', 50'-75' wide spread; ovoid to globular form; winter red, knobby flower buds; flowers in March; fruit May-June, medium to fast grower.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Tolerates soil compaction, pollution, ozone and sulfur dioxide, performs well in the right of way.
Habitat:	Moist woods to swampy forests.	Ecosystem Services:	Seeds, buds, flowers, and twigs eaten by birds and mammals.		
Hydrology:	Tolerant of flooding, saturated soil 25% growing season				
Ornamental Value:	Early spring red flowers before leafing out, red leaves in fall.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	A host of the Asian longhorn beetle, attacked by various fungi; used as street tree, and in parks, natural areas		
Shade Tolerance:	Tolerant of shade.				

Acer saccharinum

Silver Maple

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.0-7.0
Form/Color	Irregular and globular form; 75' to 100', 75' to 100' wide spread; red to orange twigs; winter reddish, brownish flowerbuds; dull green flowers February to March; fruit April- May.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerates soil compaction, sensitive to ozone.
Habitat:	Forest, savanna, low open areas, floodplains, streamside, low lakeshore and swamp.	Ecosystem Services:	Seeds, buds, flowers, and twigs eaten by birds and mammals.		
Hydrology:	Tolerant of flooding, saturated soil 25% growing season				
Ornamental Value:	Green bell-shaped flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:	Fast grower, 130 year lifespan, host of the Asian longhorn beetle; used in restoration of swamp forests, flood plains, wetland mitigation.		
Shade Tolerance:	Tolerant of partial shade.				

Acer saccharum

Sugar Maple

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.5-7.3
Form/Color	Oval to rounded form; 75' to 100', 35' to 50' wide spread; pale yellow green bell-shaped flowers April- early May; green to tan brown samara fruit in September.	Stormwater Tolerance:	Potentially tolerant of stormwater.	Urban Tolerance:	Does not tolerate soil compaction, performs well in the right of way.
Habitat:	Forest, mesic ravines, coves, north and east facing slopes, floodplains.	Ecosystem Services:	Seeds, buds, flowers eaten by upland songbirds, small mammals.		
Hydrology:	Intolerant of flooding; grows well in limestone soils				
Ornamental Value:	Range of yellow to orange to red fall color.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Slow grower, to 150 years; susceptible to Verticillium wilt; host to sugar maple borer, Asian longhorn beetle; foliage susceptible to gypsy moth.		
Shade Tolerance:	Tolerant of shade.				

Amelanchier arborea

Common Serviceberry

Native To:	Regional	Wetland Indicator:	FACU, FAC	Soil:	pH 5.5-7.5
Form/Color	Rounded crown; 12' to 30'; dark green foliage; white flowers April-May; red-purple fleshy fruit June.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Upland woods, rich limestone soil; rocky soils on open slopes, wood edges, and stream banks.	Urban Tolerance:		Tolerates concrete debris, performs well in the right of way.	
Hydrology:	Grows best in medium well-drained acidic soils	Ecosystem Services:		Fruit eaten by birds and mammals; host to larvae of some butterfly species.	
Ornamental Value:	Red-orange fall color, fragrant white flowers April-May.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Edible fruit; used for forest restoration.	
Shade Tolerance:	Tolerant of partial shade.				

Amelanchier canadensis

Canadian Serviceberry

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.0-6.5
Form/Color	Low shrubby and multi-stemmed; 25'; white flowers April-May; purple fleshy fruit June-July; moderate growth rate.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Shrub swamp, moist, sterile sandy soil of back dune thickets	Urban Tolerance:		Intolerant of soil compaction, sensitive to ozone, performs well in the right of way.	
Hydrology:	Moist to dry soil; intolerant of drought; saturated soil 25% growing season.	Ecosystem Services:		Fruit eaten by birds and mammals; host to larvae of some butterfly species.	
Ornamental Value:	Red-orange fall color, white flowers April-May.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Used for back dune woodland, shrub swamps, moist woodland, and swamp forest.	
Shade Tolerance:	Tolerant of shade.				

Amelanchier laevis

Native To: Regional

Wetland Indicator: NI

Soil: pH 6.1-6.5

Form/Color: Globular or obovoid; to 25' tall; 25'-35' wide spread; red to maroon green in spring, blue green in summer, orange to dull red in fall; deciduous early May to mid October.

Stormwater Tolerance: Tolerant of stormwater.

Urban Tolerance: Sensitive of soil compaction, sensitive to ozone, performs well in the right of way.

Habitat: Mesic coves, north and east slope aspects, cool rich woods.

Ecosystem Services: High wildlife value for songbirds, small mammals, and humans.

Hydrology: Well to moderately well drainage; very intolerant of flooding.

Ornamental Value: Orange, red fall color.

Compatibility:

Salt Tolerance: Low tolerance of salt.

Other: Medium lifespan.

Shade Tolerance: Very tolerant of shade.

Betula alleghaniensis

Native To: New York City

Wetland Indicator: FAC

Soil: pH 4.6-6.9

Form/Color: Grows to 80'; blooms April-May; yellowish silvery bark; fruits August-October, catkins egg-shaped and upright.

Stormwater Tolerance: Insufficient information to determine tolerance.

Urban Tolerance: Tolerant of urban conditions.

Habitat: Northern forest with well drained, fertile loam soils.

Ecosystem Services: Seeds, sap, and bark eaten by birds and mammals.

Hydrology: Intolerant of flooding; moist well drained, fertile loam soils.

Ornamental Value: Yellow fall color.

Compatibility:

Salt Tolerance: Moderately tolerant of salt.

Other: Minor element in forest restorations north of New York City.

Shade Tolerance: Intolerant of shade.

Yellow Birch

Betula lenta

Black Birch

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.0-6.8
Form/Color	Grows to 70'; blooms April-May; pale yellow color in fall; young bark marked by thin horizontal lenticels, older bark often cracked.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Sensitive to soil compaction.
Habitat:	Moist to dry, well-drained, upland, acid forest soil.	Ecosystem Services:	Seeds eaten by birds.		
Hydrology:	Moderately tolerant of drought				
Ornamental Value:	Yellow fall color.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:	Also known as sweet birch and cherry birch. Broken twigs give off wintergreen odor.		
Shade Tolerance:	Moderately tolerant of shade.				

Betula nigra

River Birch

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.0-6.5
Form/Color	Columnar and globular form; 50'-75';30'-50' wide spread; clear yellow in fall; green to pale yellow, drooping catkins; green to tan-brown strobiles.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Resistant to soil compaction, prefers acidic soils, performs well in the right of way.
Habitat:	Floodplain depression, swampy bottomlands, low open sites along streambanks.	Ecosystem Services:	Seeds eaten by birds, waterfowl, and small mammals.		
Hydrology:	Tolerant of drought, flooding, saturated soil 25% of growing season.				
Ornamental Value:	Clear yellow fall color, white bark.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Short lifespan 50-75 years; weak-wooded, fast grower.		
Shade Tolerance:	Intolerant of shade.				

Betula populifolia

Gray Birch

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.0-7.5
Form/Color	30'; white bark at maturity with black horizontal lines and chevron-shaped markings; light green to yellow green catkins in April; medium green to tan brown strobiles September-December.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Wetland edges; lowland wet, upland dry; swamp edges; low lake edges; dry steep rocky land.	Urban Tolerance:			Tolerant of soil compaction, prefers acidic soils, performs well in the right of way.
Hydrology:	Tolerates flooding, saturated soil 75% growing season.	Ecosystem Services:			Seeds and fruit eaten by birds and mammals; leaves eaten by various moth species.
Ornamental Value:	Yellow fall color; smooth white bark.	Compatibility:			
Salt Tolerance:					Tolerant of salt.
Shade Tolerance:	Intolerant of shade.	Other:			Used for vegetation restoration on open, bare mineral soil; park tree; common lifespan 15 to 30 years, fast grower.

Carpinus caroliniana

American Hornbeam

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.0-7.5
Form/Color	Obovoid to globular form; 35'-50' ; 35'-50' wide spread; red/reddish green catkin late April to early May; orange to red drooping 3-winged samara clusters mid June to October.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Lowland or upland wet mesic; understory forest edges; closed canopy woodlands. in moist, undisturbed woods; swamp forest edges, closed canopy woodlands.	Urban Tolerance:			Sensitive to soil compaction. Performs well in the right of way.
Hydrology:	Sensitive to drought and flooding, poor to excessive drainage.	Ecosystem Services:			Low wildlife value for songbirds and water fowl.
Ornamental Value:	Green to yellow, hanging fruit. Good fall color. Trunk has a distinctive muscular appearance.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Medium lifespan, mature at about 150 years; susceptible to fire, slow grower. Also known as blue beech, musclewood and ironwood.
Shade Tolerance:	Tolerant of shade.				

Carya cordiformis

Bitternut Hickory

Native To:	New York City	Wetland Indicator:	FACU+	Soil:	pH 5.5-8.5
Form/Color	Globular form; 75'-100'; 75'-100' wide spread; yellow green catkins bloom May; round yellow green to brown nut late August to mid October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Lowland wet mesic, upland mesic and mesic dry; flood plain; moist or dry slopes and uplands.	Urban Tolerance:		Tolerant of concrete debris.	
Hydrology:	Moderate tolerance of drought and flooding.	Ecosystem Services:		Moderate value.	
Ornamental Value:	Globular form, yellow-green catkins.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Medium to long lifespan, shortest lived 200 years; increases diversity and aesthetics in upland forest; park tree, street tree, slow grower.	
Shade Tolerance:	Tolerant of shade.				

Carya glabra

Pignut Hickory

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 6.1-7.5
Form/Color	Irregular obovoid; 75'-100'; 35'-50' wide; yellow green catkins mid May, pear shaped yellow green nut in early September to late October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Upland dry, steep rocky land, sandy hills, upland ridges and ravines, warm south facing slopes.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Intermediate value to songbirds and small mammals.	
Ornamental Value:	Obovoid, yellow-green catkins.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Long lifespan, can live to 300 years, slow grower.	
Shade Tolerance:	Moderately tolerant of shade.				

Carya ovata

Shagbark Hickory

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 6.1-6.5
Form/Color	Irregular ovoid and obovoid; 75'-100'; 35'-50 wide spread; yellow green catkins in mid May; globular brown nut in early September to mid October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Upland moist to dry undisturbed forests; upland mesic dry; dry south and west facing slopes.	Urban Tolerance:		Intermediate tolerance of soil compaction.	
Hydrology:	Moderately poor to well drained soil; intolerant of flooding.	Ecosystem Services:		Nuts, flowers, bark eaten by birds and mammals.	
Ornamental Value:	Shreddy bark when older, yellow-green catkins, yellow fall color.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Long lifespan, 300 years; susceptible to fire damage.	
Shade Tolerance:	Moderately tolerant of shade.				

Carya tomentosa

Mockernut Hickory

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 6.1-6.5
Form/Color	Irregular-obovoid; 75'-100'; 35'-50' wide spread; yellow green catkins in mid May; globular brown nut in early September to mid October; slow grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Upland moist to dry forests.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Intolerant of flooding.	Ecosystem Services:		Nuts, flowers, bark eaten by birds and mammals.	
Ornamental Value:	Irregular obovoid, yellow-green catkins.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Long lifespan; susceptible to fire; park and street tree; increases diversity and aesthetics in upland forest.	
Shade Tolerance:	Intolerant of shade.				

Celtis occidentalis

Common Hackberry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.5-8.5
Form/Color	Globular form; 75'-100' tall', 75'-100' wide spread; light blue green in summer; pale yellow in autumn; purple brown berry September to February.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Lowland wet-mesic, upland dry mesic, drainage basins, mature floodplains, wooded slopes, windbreaks.	Urban Tolerance:			Tolerant of concrete debris; intolerant of soil compaction, performs well in the right of way. Tolerant of pollution.
Hydrology:	Moderately tolerant of flooding and saturated soil 25% growing season.	Ecosystem Services:			Fruit eaten by humans, songbirds, and small mammals. Host to numerous butterflies and moths including the hackberry emperor and American snout.
Ornamental Value:	Pale yellow color in fall.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Medium to long lifespan; frequently infected by witches' broom, powdery mildew, leaf spots, moderately fast growers.
Shade Tolerance:	Moderately tolerant of shade.				

Chamaecyparis thyoides

Atlantic White Cedar

Native To:	Regional	Wetland Indicator:	OBL	Soil:	pH 3.0-5.5
Form/Color	Grows to 75'; evergreen tree; small bluish cones turn brown; moderate grower.	Stormwater Tolerance:			Potentially tolerant of stormwater.
Habitat:	Found growing on hummocks in acid bogs and acid muck soils.	Urban Tolerance:			Performs well in the right of way.
Hydrology:	Tolerant of flooding; saturated soil almost 100% of the growing season.	Ecosystem Services:			Moderate wildlife value.
Ornamental Value:	Attractive, feathery evergreen foliage.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Minor species for restoration of marshes edges; evergreen screen in full sun; good species for raingarden installations.
Shade Tolerance:	Intolerant of shade.				

Cornus florida

Flowering Dogwood

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.5-7.0
Form/Color	Globular form; 35'-50'; 35'-50' wide spread; light green or yellow green in spring, bright green in summer, scarlet red in fall; yellow flowers April- early May; red berry clusters early September-mid November.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction.
Habitat:	Wooded slopes, ravines, bluffs.	Ecosystem Services:	Seeds, fruit, and twigs eaten by migratory birds and deer.		
Hydrology:	Moist well-drained soil; intolerant of flooding.				
Ornamental Value:	White flowers early April-June. Clusters of showy red fruit and red-purple fall leaf color.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Medium lifespan, mature at about 150 years; park tree; secondary species used in diversifying and restoring forest understories.		
Shade Tolerance:	Tolerant of shade.				

Crataegus crus-galli

Cockspur Hawthorn

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 4.5-7.2
Form/Color	Grows to 20'-35'; 20'-35' wide spread; globular; bright green in spring, dark green in summer, bright orange to red foliage in fall; white flowers bloom in May; orange to red fruit from August to January.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Tolerant of compacted soil and various soil pH levels, performs well in the right of way.
Habitat:	Dry and rocky places; on slopes of low hills in rich soils; floodplains; borders of woods.	Ecosystem Services:	Intermediate wildlife value; fruit eaten by songbirds, upland ground birds, large and small mammals.		
Hydrology:	Tolerant of flooding.				
Ornamental Value:	Orange to red fall color, attractive fruit.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:	Susceptible to fire blight, powdery mildew, scab; host to aphids, borers, lace bugs; short lifespan, moderate grower.		
Shade Tolerance:	Tolerant of shade.				

Diospyros virginiana

Persimmon

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	pH 6.0-6.5
Form/Color	Ovoid; 50'-75'; 35'-50'; green or yellow orange in fall; yellow flower through mid June; yellow orange globular berry September - late November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rocky fields, pastures, waste ground, rich alluvial bottomlands, hillside woods.	Urban Tolerance:		Moderately tolerant of soil compaction.	
Hydrology:	Moist to wet swamp edge soil; moderate tolerance of flooding.	Ecosystem Services:		Fruit eaten by humans, birds, and small mammals.	
Ornamental Value:	Yellow flowers through mid June, attractive fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Used for stabilizing slopes. Minor species for diversifying and restoring forest understories, slow grower.	
Shade Tolerance:	Intolerant of shade.				

Fagus grandifolia

American Beech

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.1-6.5
Form/Color	Conical/ovoid; 75'-100';50'-75' wide spread; blue green in summer, yellow to brown in fall; yellow green hanging globe flower clusters in April-May, tan nut September-mid November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Floodplain knolls, elevated terrace, mesic ravines, cool air drainage areas, north and east slope aspects.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Intolerant of flooding, well to moderately well drainage.	Ecosystem Services:		Nuts eaten by wildlife.	
Ornamental Value:	Silver bark.	Compatibility:		Known to sucker vigorously.	
Salt Tolerance:	Intolerant of salt.	Other:		Slow to medium grower; sometimes infected by beechbark disease; bark susceptible to frost and fire damage and fungi attack.	
Shade Tolerance:	Tolerant of shade.				

Fraxinus americana

White Ash

Native To: New York City

Wetland Indicator: FACW-

Soil: pH 6.1-7.5

Form/Color

**Stormwater
Tolerance:**

Habitat:

Hydrology:

**Ornamental
Value:**

Due to the potential for infestation by Emerald Ash Borer (*Agrilus planipennis*), Parks does not recommend planting Fraxinus species at this time.

**Salt
Tolerance:**

Other: Vulnerable to Emerald Ash Borer.

**Shade
Tolerance:**

Fraxinus pennsylvanica

Green Ash

Native To: Regional

Wetland Indicator: FACW

Soil: pH 6.1-7.5

Form/Color

**Stormwater
Tolerance:**

Habitat:

Hydrology:

**Ornamental
Value:**

Due to the potential for infestation by Emerald Ash Borer (*Agrilus planipennis*), Parks does not recommend planting Fraxinus species at this time.

**Salt
Tolerance:**

Other: Vulnerable to Emerald Ash Borer

**Shade
Tolerance:**

Ilex opaca

American Holly

Native To:	New York City	Wetland Indicator:	FACU+	Soil:	pH. 4.0-7.5
Form/Color	Evergreen, green shiny, pointed leaves; 40'; small white flowers May - June, red fruit October- November into winter.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Coastal; sterile, sandy soils, back-dune forests.	Urban Tolerance:			Intolerant of concrete debris. Performs well in the right of way.
Hydrology:	Moderately tolerant of drought; prefers well-drained moist soil.	Ecosystem Services:			Fruit eaten by birds, wintercover for birds.
Ornamental Value:	Small white flowers in May-June. Evergreen leaves with red fruit persistent throughout the winter.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Used for in back dune holly forests and scrub. Attacked by leafminer and tortricid moth leaf rollers.
Shade Tolerance:	Tolerant of shade.				

Juglans nigra

Black Walnut

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH.4.6-8.2
Form/Color	Irregular form; 75'-100'; 75'-100' wide spread; golden yellow in fall; yellow green catkins May-June; yellow green nut turns black from August to late September.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Alluvial floodplain, stream banks, upland in open or abandoned fields.	Urban Tolerance:			Moderately tolerant of soil compaction.
Hydrology:	Moderately tolerant of flooding; grows on deep well-drained soil.	Ecosystem Services:			Low wildlife value. Edible for humans and small mammals.
Ornamental Value:	Golden yellow color in fall. Large green-yellow fruit.	Compatibility:			Allelopathic.
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Juniperus virginiana

Eastern Red Cedar

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.1-8.0
Form/Color	Evergreen; conical; blue green in spring, dark olive green in summer and fall; red purple and yellow flowers through late May, gray/blue green cone of berries July-late March.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Dry hillsides, semi-barren land, calcareous cliffs, steep rocky land, abandoned farmland, occasionally in open alluvial woods.	Urban Tolerance:		Intolerant of soil compaction; tolerant of concrete debris, performs well in the right of way.	
Hydrology:	Moderately poor to excessive drainage; moist conditions; tolerates drought.	Ecosystem Services:		Cones eaten by birds and mammals, winter cover for birds.	
Ornamental Value:	Red purple and yellow flowers through late May.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Long lifespan, slow grower, grows in old fields and back dune coastal woodlands; used for vegetation of sandy dredge spoil.	
Shade Tolerance:	Intolerant of shade.				

Liquidambar styraciflua

American Sweetgum

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.1-6.5
Form/Color	Conical to ovoid; 75'-100'; 50'-75' wide spread; scarlet red to purple in fall; deciduous in late April to late October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Alluvial floodplain, stream edges, moist forests, swamp forests.	Urban Tolerance:		Tolerant of soil compaction, performs well in the right of way, minimal tolerance of pollution.	
Hydrology:	Well to poor drainage, tolerant of flooding and poorly drained soil.	Ecosystem Services:		Low wildlife value.	
Ornamental Value:	Scarlet red color in fall. Globe-like hanging fruit with spines that may persist into the winter.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Slow to medium grower; long lifespan, used for wetland mitigation; street and park tree.	
Shade Tolerance:	Intolerant of shade.				

Liriodendron tulipifera

Tuliptree

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.0-6.5
Form/Color	Columnar form; 75'-100'; 35'-50' wide spread; lemon yellow in summer; yellow green with orange splotched flowers in early to mid June; medium lifespan.	Stormwater Tolerance:			Potentially tolerant of stormwater.
Habitat:	Sheltered coves, lower slopes and hills, stream valleys.	Urban Tolerance:			Intolerant of soil compaction, performs well in the right of way.
Hydrology:	Well to moderately well drainage, moist to average moisture; intolerant of flooding.	Ecosystem Services:			Low wildlife value for small mammals and songbirds.
Ornamental Value:	Very showy large yellow flowers and tulip shaped leaves. Tall straight trunk.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Used for reforestation of sites with good quality moist soil, very fast grower.
Shade Tolerance:	Moderately tolerant of shade.				

Magnolia virginiana

Sweet-bay Magnolia

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.0-6.0
Form/Color	White fragrant flowers May-July; red fleshy fruit August to October. Foliage whitish beneath.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Understories of coastal plain red maple swamp forests and Atlantic white cedar bogs.	Urban Tolerance:			Performs well in the right of way.
Hydrology:	Tolerant of flooding.	Ecosystem Services:			Fruit eaten by birds.
Ornamental Value:	White flowers May-July, red fruits.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Minor species for swamp forest reforestation and wetland mitigations.
Shade Tolerance:	Tolerant of shade.				

Nyssa sylvatica

Black Tupelo

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.1-6.5
Form/Color	Broad conical form; 50'-75'; 35'-50' wide spread; scarlet red in fall; greenish white small flower clusters May- early June; blue berry clusters Sept through mid October.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Low ridges or second bottoms, alluvial flats, dry upper and middle flats.	Urban Tolerance:			Performs well in the right of way.
Hydrology:	Intolerant of flooding.	Ecosystem Services:			Intermediate wildlife value for songbirds and small mammals.
Ornamental Value:	Scarlet red to purple leaf color in fall. Purple fruit. Horizontal branching pattern.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Used for swamp reforestation, floodplains, and wetland mitigation.
Shade Tolerance:	Tolerant of partial shade.				

Ostrya virginiana

Hop Hornbeam

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 4.2-8.0
Form/Color	Conical form; 35'-50'; 20'-35' wide spread; maroon green in spring, yellow green in summer, pale golden yellow in fall; red brown catkins early through mid May; tan brown samara late June-late October.	Stormwater Tolerance:			Potentially tolerant of stormwater.
Habitat:	Moist to dry upland slopes, coves and ravines, rocky stream edges, moist to dry forest understory.	Urban Tolerance:			Intolerant of soil compaction; tolerant of concrete debris, performs well in the right of way.
Hydrology:	Intolerant of flooding.	Ecosystem Services:			Low wildlife value for songbirds and small mammals.
Ornamental Value:	Green to yellow hanging fruit. Fine peeling bark. Pale golden yellow leaf color in fall.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Slow grower.
Shade Tolerance:	Tolerant of shade.				

Picea rubens

Red Spruce

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 4.5-5.0
Form/Color	Evergreen; oval shape; 50'-70'; medium green color in spring; remains green in fall; light brown, ovoid cone; yellow flower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist, rocky woods, hillsides, uplands.	Ecosystem Services:	Low provider of food for small mammals and terrestrial birds; provides moderate cover for small mammals; provides high cover for terrestrial birds.	Compatibility:	
Hydrology:	Medium drought tolerance; medium moisture usage.	Other:	Long lifespan, medium grower.		
Ornamental Value:	Yellow flowers bloom mid Spring, evergreen foliage.				
Salt Tolerance:	Intolerant of salt.				
Shade Tolerance:	Tolerant of shade.				

Pinus echinata

Shortleaf Pine

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.0-6.0
Form/Color	Evergreen; conical form; 80'-100'; produces red to brown 2 inch long egg-shaped cones; moderate grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction.
Habitat:	Dry, sandy, or rocky soil; south-facing or west-facing slopes; old agricultural fields.	Ecosystem Services:	High-quality wildlife habitat.	Compatibility:	
Hydrology:	Deep, well-drained sandy soil. Drought tolerant once established.	Other:	Minor species in restoring forests in sandy soil of south Staten Island, Long Island, and New Jersey coastal plain.		
Ornamental Value:	Pale golden yellow color in fall, persisting cones, evergreen foliage.				
Salt Tolerance:	Intolerant of salt.				
Shade Tolerance:	Intolerant of shade.				

Pinus resinosa

Red Pine

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 4.5-6.5
Form/Color	Evergreen; conical to ovoid; 75'-100'; 50'-75' wide; bright green to dark green foliage by midsummer; reddish purple cone mid May- early June; tan brown to silvery gray cone from mid August- late October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Sensitive to soil compaction.
Habitat:	Dry sandy or rocky soil; low ridges adjacent to lakes, ridgetops, outwash plains.	Ecosystem Services:	Very high wildlife value for songbirds, upland ground birds, small mammals, hoofed browsers.		
Hydrology:	Intolerant of flooding; prefers moist conditions but tolerates dry conditions.	Compatibility:			
Ornamental Value:	Reddish-brown, scaly bark, evergreen foliage.	Other:	Long lifespan, medium grower.		
Salt Tolerance:	Low tolerance of salt.				
Shade Tolerance:	Moderately tolerant of shade.				

Pinus rigida

Pitch Pine

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.6-6.5
Form/Color	Evergreen; irregular and globular form; 50'-75'tall; 50'-75' wide spread; dark yellow green; red purple cone in May.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction, sensitive to ozone.
Habitat:	Sterile sandy soil; shallow soil on steep rocky land, ridges, south or west facing slopes, windbreak.	Ecosystem Services:	Very high wildlife value for songbirds, upland birds, and small birds.		
Hydrology:	Tolerates drought; intolerant of flooding and saturated soil for more than 25%	Compatibility:			
Ornamental Value:	Irregular globular form, persisting cones, evergreen foliage.	Other:	Able to tolerate fire. Used for restoring rocky or pine barren habitats, short lifespan, fast grower.		
Salt Tolerance:	Tolerant of salt.				
Shade Tolerance:	Intolerant of shade.				

Pinus strobus

Eastern White Pine

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.0-6.5
Form/Color	Evergreen; conical to ovoid; 75'-100'; 50'-75'; light green spring and bright green summer, fall, and winter; medium grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction, sensitive to ozone.
Habitat:	North-facing slopes, sheltered coves, rocky stream edges, steep rocky land.	Ecosystem Services:	Very high wildlife value for songbirds, upland birds, and small birds.		
Hydrology:	Moderately poor to well drainage.				
Ornamental Value:	Conical form, evergreen foliage.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Typical roosting place for owls; long lifespan.		
Shade Tolerance:	Moderately tolerant of shade.				

Pinus virginiana

Virginia Pine

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.6-7.9
Form/Color	Evergreen; irregular form; reaches 30'. Cones egg-shaped and numerous remaining on the tree a long time.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction, wounding, and fill.
Habitat:	Dry , sandy, or sterile soil.	Ecosystem Services:	High wildlife value for white-tailed deer and other small mammals.		
Hydrology:	Drought tolerant.				
Ornamental Value:	Irregular form, persisting cones, evergreen foliage.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Moderate lifespan, fast grower.		
Shade Tolerance:	Intolerant of shade.				

Platanus occidentalis

American Sycamore

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 6.5-8.5
Form/Color	Distinctive mottled brown bark flakes off in puzzle like pieces exposing yellow and white patches underneath; blooms April-May; fast grower.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Flood plains, moist fill soil.	Urban Tolerance:		Urban Tolerance:	Tolerant of concrete debris and soil compaction, performs well in the right of way.
Hydrology:	Tolerant of flooding or saturated soil 25% of growing season.	Ecosystem Services:		Ecosystem Services:	Low wildlife value.
Ornamental Value:	Brown and chalky white, bark. Hanging globe-like fruit persisting into winter.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Other:	Used for floodplain forest restoration, rivers, streambanks, wetland mitigation. Fast grower.
Shade Tolerance:	Moderately tolerant of shade.				

Populus deltoides

Eastern Cottonwood

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.5-7.5
Form/Color	Reaches 150'; reddish catkins bloom March- April; produces egg-shaped fruit May-June.	Stormwater Tolerance:		Stormwater Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist fill soils; disturbed sites on bare soil, old fields.	Urban Tolerance:		Urban Tolerance:	Tolerant of soil compaction and disturbed soil.
Hydrology:	Tolerant of flooding.	Ecosystem Services:		Ecosystem Services:	Buds, catkins, eaten by birds; twigs and leaves eaten by rabbits and deer.
Ornamental Value:	White bark, early flower, reddish catkins.	Compatibility:		Compatibility:	Fluffy white seeds considered a nuisance.
Salt Tolerance:	Tolerant of salt.	Other:		Other:	Susceptible to fire damage; attacked by many insects and fungi; short lifespan, fast grower.
Shade Tolerance:	Intolerant of shade.				

Populus grandidentata

Bigtooth Aspen

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.0-6.3
Form/Color	Columnar; 50'-75' tall; 20'-35' wide spread; golden yellow in fall; silvery gray catkin in late April; yellow green capsules May-mid June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Lower slopes with northeast aspects or high terraces, mesic shoulder of upland ridges.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Moderately well to excessively drained; wet to moist soils; intolerant of flooding.	Ecosystem Services:		High wildlife value for songbirds, upland groundbirds, and small mammals.	
Ornamental Value:	Early flower, golden yellow leaves in fall, white bark.	Compatibility:		Frequently forms colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Populus tremuloides

Quaking Aspen

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.8-6.5
Form/Color	Columnar; 35'-50'; 20'-35' wide spread; light green spring, bright green in summer, bright yellow in fall; silvery gray catkins March - April; yellow green conical capsules May.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Seeps; slopes with cool air drainage; rocky streams; north- and east-facing slopes; disturbed sites.	Urban Tolerance:		Intolerant of soil compaction, sensitive to ozone.	
Hydrology:	Moderately well to excessively drainage; moderately tolerant of drought.	Ecosystem Services:		High wildlife value for songbirds, upland groundbirds, small mammals, and hoofed browsers.	
Ornamental Value:	Early flower, yellow color in fall, white bark.	Compatibility:		Frequently forms colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:		Short lifespan, fast grower; Susceptible to canker, leaf spot, shoot blight, poplar borer, poplar fall, scale, and red humped caterpillar.	
Shade Tolerance:	Intolerant of shade.				

Prunus americana

American Plum

Native To:	Regional	Wetland Indicator:	FACU-	Soil:	pH 6.6-7.5
Form/Color	Globular; 20'-35'; 20'-35' wide spread; pale golden yellow in fall; deciduous late May- late September; white flat-topped clusters of flowers early through mid May; large fleshy plum-like red to purplish berry.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Upland pastures, margins of woods, fencerows, steep rocky hillsides, streambanks, open oak woods.	Urban Tolerance:		Sensitive to soil compaction.	
Hydrology:	Very intolerant of flooding; moderately well to excessive drainage; tolerates drought.	Ecosystem Services:		Very low wildlife value.	
Ornamental Value:	Pale golden yellow fall color.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Short lifespan.	
Shade Tolerance:	Intolerant of shade.				

Prunus serotina

Black Cherry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.0-8.0
Form/Color	Columnar to ovoid; 35'-50' wide spread; maroon green in spring; dark green in summer; yellow to orange in fall; white flowers May- early June. Bark resembles burnt cornflakes.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rocky hillside, fence rows; borders of wooded areas, abandoned fields, alluvial bottomlands; found on sandy, acid back dunes soil and concrete debris.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Well to moderately well drainage; very intolerant of flooding.	Ecosystem Services:		Very high wildlife value for songbirds and small mammals.	
Ornamental Value:	White flowers in spring, long raceme of purple fruit in summer.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Common early succssional species of open areas, eroded, open slopes, burns, wildlife corridors.	
Shade Tolerance:	Intolerant of shade.				

Prunus virginiana

Common Chokecherry

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 6.8-7.2
Form/Color	Obovoid; 35'-50'; 20'-35' wide spread; golden yellow to orange in fall; white fragrant flower in early May; red fleshy fruit edible in August to October.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Open-wooded slopes, wood edges, open woods, open fields, fencerows.	Urban Tolerance:		Intolerant of soil compaction, performs well in the right of way and in well-drained fill soils.	
Hydrology:	Moderately well to well drainage; prefers moist to dry moisture conditions.	Ecosystem Services:		Very high wildlife value for songbirds, small mammals, and large mammals.	
Ornamental Value:	Long raceme of red fruit in summer.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Used for vegetation of open areas, slope stabilization, wildlife corridors.	
Shade Tolerance:	Moderately tolerant of shade.				

Quercus alba

White Oak

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 6.1-7.5
Form/Color	Globular; 75'-100'; 75'-100' wide spread; bright red to silvery gray in spring, medium green to blue green in summer, burgundy in fall; yellow green catkins late May; acorns September- early October.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Moist, warm south and west facing slopes, upland flats, rocky hillsides.	Urban Tolerance:		Very intolerant of soil compaction, sensitive to ozone, performs well in the right of way.	
Hydrology:	Intolerant of flooding.	Ecosystem Services:		Very high wildlife value for songbirds, upland ground birds, small mammals, hooved browsers.	
Ornamental Value:	Burgundy fall color.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Long lifespan.	
Shade Tolerance:	Moderately tolerant of shade.				

Quercus bicolor

Swamp White Oak

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.0-7.0
Form/Color	Ovoid; 75'-100'; 50'-75' wide spread; purlish green in spring, dark green in summer; golden yellow brown in fall.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Maturing or older swamp forests; edges of swamp forests and Phragmites marsh.	Urban Tolerance:		Urban Tolerance:	Resistant to soil compaction, performs well in the right of way.
Hydrology:	Tolerant of flooding; wet to moist moisture levels.	Ecosystem Services:		Ecosystem Services:	Very high wildlife value for waterbirds, upland birds, songbirds, small mammals, hooved browsers.
Ornamental Value:	Yellow green catkins early through mid May.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Other:	Oak anthracose outbreaks can kill tree; medium lifespan, medium to fast grower.
Shade Tolerance:	Moderately tolerant of shade.				

Quercus coccinea

Scarlet Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.1-6.5
Form/Color	Globular form; 50'-75 tall';50'-75' wide spread; green in spring, bright green in summer, scarlet red in fall.	Stormwater Tolerance:		Stormwater Tolerance:	Potentially tolerant of stormwater.
Habitat:	Steep rocky land, ridgetops, warm upper and middle slopes, south and west slope aspects.	Urban Tolerance:		Urban Tolerance:	Sensitive to soil compaction, performs well in the right of way.
Hydrology:	Very intolerant of flooding; well to excessive drainage; average to dry.	Ecosystem Services:		Ecosystem Services:	Very high wildlife value for songbirds, upland ground birds, small mammals, and hooved browsers.
Ornamental Value:	Scarlet red color in fall.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Other:	Long lifespan 200-300 years, medium to fast grower.
Shade Tolerance:	Intolerant of shade.				

Quercus marilandica

Blackjack Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.0-5.0
Form/Color	Ovoid; 35'-50' tall; 35'-50' wide spread; bright red to yellow green in spring; yellow green in summer; red in fall; yellow green or pale orange red catkins mid May-early June; ripe acorns Sept.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rocky sandy ridgetops, edges of woods, sand terrace.	Urban Tolerance:		Intolerant of soil compaction, performs well in the right of way.	
Hydrology:	Intolerant of flooding; tolerant of dry droughty soils.	Ecosystem Services:		Very high wildlife value for upland ground birds, songbirds, hoofed browsers, and small mammals.	
Ornamental Value:	Red leaf color in fall.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Long lifespan 200-300 years.	
Shade Tolerance:	Intolerant of shade.				

Quercus palustris

Pin Oak

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.5-6.5
Form/Color	Conical; 50'-75' tall; 50'-75' wide spread; maroon green in spring; dark green in summer; deep scarlet red in fall.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Swamp and floodplains forests, second bottoms, alluvial flats, rich mesophytic forest.	Urban Tolerance:		Sensitive to soil compaction, tolerant of sulfur dioxide, performs well in the right of way.	
Hydrology:	Tolerant of flooding and saturated soil up to 25% of growing season.	Ecosystem Services:		Very high wildlife value for songbirds, waterbirds, upland groundbirds, small mammals, and hoofed browsers.	
Ornamental Value:	Scarlet red color in fall.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Used for in swamp forest reforestation, flood plains, wetland mitigation, street tree; medium lifespan 125-175 years, fast grower.	
Shade Tolerance:	Intolerant of shade.				

Quercus phellos

Willow Oak

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	pH 4.5-6.0
Form/Color	80'; blooms in May; thin un-lobed leaves are shiny above; seeds ripe in September-November; moderate grower.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Swamp forests.	Urban Tolerance:			Intolerant of soil compaction, tolerant of air pollution and wide range of soils, performs well in the right of way.
Hydrology:	Tolerant of flooding and saturated soil up to 25% of growing season.	Ecosystem Services:			Acorns eaten by small mammals.
Ornamental Value:	Conical to oblong, willow-like leaves. Yellow fall color.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Secondary species in restoring swamp forests and wetland mitigation.
Shade Tolerance:	Intolerant of shade.				

Quercus prinus

Chestnut Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 3.5-6.5
Form/Color	70'; bark is dark, deeply ridged, and distinctive; blooms in May; ripe acorns September-November.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Dry, rocky, sandy soil; rocky slopes; upland forests.	Urban Tolerance:			Intolerant of soil compaction, performs well in the right of way.
Hydrology:	Intolerant of flooding; drought tolerant.	Ecosystem Services:			Very high wildlife value; acorns eaten by birds and small mammals.
Ornamental Value:	Massively ridged gray-brown bark.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Used for forest restoration in old fields and parks; host to some butterfly larvae species; long lifespan; slow grower.
Shade Tolerance:	Moderately tolerant of shade.				

Quercus rubra

Red Oak

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 4.5-6.5
Form/Color	50'-75'; 75'-100' wide spread; distinctive bark with shallow furrows often compared to ski trails; blooms in May; ripe acorns September-October.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Common in New York City forests; Appalachian oak-hickory forest; rich mesophytic forest.	Urban Tolerance:			Tolerant of soil compaction, tolerant of pollution, performs well in the right of way.
Hydrology:	Deep, moist, well-drained soils; intolerant of flooding.	Ecosystem Services:			High wildlife value; acorns eaten by birds and small mammals.
Ornamental Value:	Yellowish to red fall color.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Used for restoring upland deciduous forests; park tree; street tree; long lifespan; slow grower.
Shade Tolerance:	Moderately tolerant of shade.				

Quercus stellata

Post Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.6-6.5
Form/Color	Globular form; 35'-50'; 35'-50' wide spread; dark red in spring, deep dark green in summer, yellow green catkins May-early June; acorns ripe September-early October.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Sandy ridges, dry rocky hillsides, southern slopes.	Urban Tolerance:			Intolerant of soil compaction.
Hydrology:	Intolerant of flooding; tolerant of drought.	Ecosystem Services:			Very high wildlife value; acorns eaten by birds and small mammals, host to larvae of some butterfly species.
Ornamental Value:	Dark red color in spring, golden yellow brown in fall.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Long lifespan of 200-300 years; slow grower. Used to reforest woodlands in sandy soils of coastal, back dune oak barrens, or rocky uplands.
Shade Tolerance:	Intolerant of shade.				

Quercus veluntina

Black Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-6.5
Form/Color	Ovoid and commonly globular; 75'-100'; 75'-100' wide spread; bright crimson red in spring; yellow green catkins mid through late May; light red brown acorn ripen September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Clay and gravelly ridges, sand dunes, middle and upper slope forests with low nutrient soils.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Very intolerant of flooding; moderately well to excessive drainage; tolerant of drought.	Ecosystem Services:		Very high wildlife value for upland ground birds, songbirds, hoofed browsers, and small mammals.	
Ornamental Value:	Crimson red in spring, yellow to golden brown in fall.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Used for reforestation of upland forest.	
Shade Tolerance:	Moderately tolerant of shade.				

Salix eriocephala

Stiff Willow

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.0-7.0
Form/Color	Grows to 12'; catkins April-May; fruit May-June; fast grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, wet soil, pond edges, ditches.	Urban Tolerance:		Tolerant of soil compaction.	
Hydrology:	Low tolerance for drought conditions; high moisture use.	Ecosystem Services:		Low wildlife value.	
Ornamental Value:	Dark gray, scaly bark.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Used for wetland reforestation and mitigation in open habitats, pond edges, stream banks, and flood plains.	
Shade Tolerance:	Tolerant of shade.				

Salix nigra

Black Willow

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 6.5-7.5
Form/Color	Columnar form; 35'-35'; 20'-35' wide spread; yellow green in fall; yellow green catkins mid March- early April; green yellow strobiles late April-mid May.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of fill soils, concrete debris, and soil compaction.
Habitat:	River margins, low lying lakeshore, swamps, swales, gullies.	Ecosystem Services:	High wildlife value for songbirds, waterfowl, and small mammals.		
Hydrology:	Very poor to moderately poor drainage; wet to moist; very tolerant of flooding.				
Ornamental Value:	Yellow green fall color.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Very fast grower, used for restoring flood plain and riverbank restoration; wetland mitigation.		
Shade Tolerance:	Intolerant of shade.				

Sassafras albidum

Sassafras

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 3.8-7.0
Form/Color	Conical and irregular form; 35'-50'; 35'-50' wide spread; yellows, oranges, reds, and purples in fall, small clusters of bright yellow and sweet fragrant flowers late April-early May.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction.
Habitat:	Found in frequently burned open areas; open woods, abandoned fields, dry ridges and upper slopes.	Ecosystem Services:	Low wildlife for songbirds, host for some butterfly larvae.		
Hydrology:	Very intolerant of flooding; well to excessive drainage.				
Ornamental Value:	Varying colors of yellow, orange, red, and purple in fall, foliage = 3 kinds of leaves.	Compatibility:	Frequently forms colonies.		
Salt Tolerance:	Tolerant of salt.	Other:	Short lifespan 50-75 years.		
Shade Tolerance:	Intolerant of shade.				

Taxodium distichum

Bald Cypress

Native To:	Regional	Wetland Indicator:	OBL	Soil:	pH 6.1-6.5
Form/Color	Conical; 75'-100'; 20'-35' wide spread; blue green in summer, maroon purple to chocolate brown in fall; drooping deep purple to brown cones.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Swamp, along rivers, oxbows, flat alluvial bottoms.	Urban Tolerance:		Urban Tolerance:	Intolerant of soil compaction, performs well in the right of way.
Hydrology:	Very flood tolerant; very poor to moderately well drainage.	Ecosystem Services:		Ecosystem Services:	Very low wildlife value.
Ornamental Value:	Feather-like needles turn copper.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Other:	Long lifespan.
Shade Tolerance:	Moderately tolerant of shade.				

Thuja occidentalis

Eastern Arborvitae

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 6.0-8.0
Form/Color	Conical; 50'-75'; 35'-50' wide spread; small red brown cone early through late May; tan brown to silvery gray egg-shaped cone early August- February.	Stormwater Tolerance:		Stormwater Tolerance:	Insufficient information to determine tolerance.
Habitat:	Swampy areas, bogs, margins of lakes, mesic coves, open rocky hillsides, open rocky pastureland.	Urban Tolerance:		Urban Tolerance:	Intolerant of soil compaction.
Hydrology:	Tolerant of flooding; poor to well drainage; wet to dry moisture levels.	Ecosystem Services:		Ecosystem Services:	Low wildlife value for songbirds, waterfowl, and small mammals; browsed by small mammals and white-tailed deer.
Ornamental Value:	Dark green foliage turns yellow-green to brown in winter.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Other:	Long lifespan, fast to medium grower.
Shade Tolerance:	Moderately tolerant of shade.				

Tilia americana

American Linden

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.5-7.5
Form/Color	Ovoid;75'-100';50'-75' wide spread; golden yellow in fall; clusters of pale yellow flowers late June-early July; tan brown samara September-October; medium grower.	Stormwater Tolerance:			Potentially tolerant of stormwater.
Habitat:	Mesic ravines, coves, north and east slope aspects, floodplain knobs, areas of cool air drainage.	Urban Tolerance:			Tolerant of concrete; intolerant of soil compaction, performs well in the right of way, minimal tolerance of pollution.
Hydrology:	Intolerant of flooding; moderate to well drainage; average moisture levels.	Ecosystem Services:			Very low wildlife value.
Ornamental Value:	Golden yellow leaves in fall.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Susceptible to Verticillium wilt, powdery mildew, leaf blight, canker.
Shade Tolerance:	Tolerant of shade.				

Tsuga canadensis

Hemlock

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 4.6-6.5
Form/Color	Broadly conical; 75'-100'; 35'-50' wide spread; coniferous evergreen; light yellow male cone and pale green female cone late May- early June; tan brown cone September - January.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Protected coves, mesic ravines, moist cool valleys, north and east slope aspects, benches, hollows under cliffs.	Urban Tolerance:			Intolerant of soil compaction, sensitive to ozone.
Hydrology:	Very intolerant of flooding; well to poor drainage; wet to average moisture levels.	Ecosystem Services:			Intermediate wildlife value for songbirds, small mammals, and hoofed browsers; good winter cover for wildlife.
Ornamental Value:	Dark green foliage year round.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Very susceptible to drought and heat; susceptible to wooly adelgid; long lifespan; medium to slow grower.
Shade Tolerance:	Tolerant of shade.				

Ulmus americana

American Elm

Native To:	New York City	Wetland Indicator:	FACW-	Soil:	pH 6.6-8.0
Form/Color	Globular; 75'-100'; 75'-100' wide spread; golden yellow in fall; small clusters of red brown flowers early-mid April; tan brown samara May.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Alluvial flats; mesic ravines, moist forest slopes.	Urban Tolerance:			Intermediate tolerance of soil compaction.
Hydrology:	Intermediate tolerance of flooding; moderate to well drainage; moist to dry.	Ecosystem Services:			Intermediate wildlife value for waterfowl, songbirds, upland ground birds, small mammals.
Ornamental Value:	Golden yellow fall color.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:			Susceptible to diseases: Dutch elm disease, cankers, Verticillium wilt; frequently susceptible to gypsy moth, bark beetles, elm borer, etc.
Shade Tolerance:	Moderately tolerant of shade.				

Shrubs

Shrubs can provide various ornamental characteristics, shelter and food sources for wildlife, and add spatial definition to the landscape. Careful selection can ensure a long season of ornamental interest and abundant food and nectar sources for wildlife.

Alnus serrulata

Common Alder

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.5-7.5
Form/Color	Deciduous, forms thickets, fast to 20', 12-20' wide, flowers red to purple catkins in March-April, fruit dry, cone-like in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction and poor soil.
Habitat:	Swamp, spring, pond or lake edges, meadow, forest.	Ecosystem Services:	Wildlife value high, host to some butterfly larvae, seeds eaten by some songbirds, twigs and leaves eaten by rabbits and deer.		
Hydrology:	Tolerant of flooding and drought.				
Ornamental Value:	Flowers, catkins, conelike fruit.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:	Nitrogen fixer, susceptible to borers, tent caterpillars, and other insects, weakened plants susceptible to canker and other fungi.		
Shade Tolerance:	Intolerant of shade.				

Arctostaphylos uva-ursi

Bearberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.5-6.0
Form/Color	Evergreen, low-growing, groundcover, pink flowers in spring, red fruits, slow grower to 6-12" tall, 2-4' wide or more.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Sensitive of soil compaction.
Habitat:	Forest, dune, bald, barrens.	Ecosystem Services:	Wildlife and birds eat fruits.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Small pink flowers, glossy green leaves turn reddish brown in winter, bright red fruits, great ground cover.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Baccharis halimifolia

Groundsel Bush

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.5-8.5
Form/Color	Semievergreen, rounded shrub, upright branches, cottony fruits in fall, fast grower to 5-12' tall, 5-12' wide.	Stormwater Tolerance:	Potentially tolerant.	Urban Tolerance:	Tolerant of soil compaction, concrete debris.
Habitat:	Coastal, salt marsh edges, usually upland of Iva. spp.	Ecosystem Services:	Cover for wildlife, nectar for bees, butterflies, moths, insects, birds eat seeds.		
Hydrology:	Tolerant of flooding, drought.				
Ornamental Value:	Deep green to gray-green leaves, cottony fruits.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:	Mostly pest free.		
Shade Tolerance:	Intolerant of shade.				

Ceanothus americanus

New Jersey Tea

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 4.5-6.0
Form/Color	Deciduous, slow to moderate grower to 3' tall, , flowers white in June-July, fruit dry in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction.
Habitat:	Open, dry, oak woods.	Ecosystem Services:	Host to some butterfly larvae.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	White flowers in summer.	Compatibility:	Can form colonies.		
Salt Tolerance:	Tolerant of salt.	Other:	Nitrogen fixer. Exceptionally deep roots make it well adapted to persist after fires.		
Shade Tolerance:	Moderately tolerant of shade.				

Cephalanthus occidentalis

Buttonbush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 6.0-8.5
Form/Color	Deciduous, grows to 12' tall, flowers white in July-August, fruit dry in September-January.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Freshwater tidal and nontidal marshes, pond edges, shallow standing water.	Urban Tolerance:		Tolerant of soil compaction, concrete debris, performs well in the right of way.	
Hydrology:	Tolerant of flooding. Intolerant of drought.	Ecosystem Services:		Seeds eaten by ducks and other birds, twigs eaten by deer and rabbits.	
Ornamental Value:	Flowers in white, ball-shaped clusters.	Compatibility:		Can form colonies.	
Salt Tolerance:	Low tolerance of salt.	Other:		Dispersed by water, dies in closed canopy swamp forest.	
Shade Tolerance:	Intolerant of shade.				

Chimaphila maculata

Spotted Wintergreen

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 5.1-6.5
Form/Color	Evergreen, grows to 1' tall by 1'8" wide, usually smaller, flowers white-pinkish in June-August, waxy, whorled.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, dry woods, sandy soils.	Urban Tolerance:		Intolerant of soil compaction and disturbance.	
Hydrology:	Requires consistently moist soil. Intolerant of drought.	Ecosystem Services:		Edible leaves, good ground cover.	
Ornamental Value:	Fragrant white-pinkish flowers in small clusters at top of stem.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Also known as striped wintergreen or striped Prince's pine.	
Shade Tolerance:	Tolerant of partial shade.				

Clethra alnifolia

Sweet Pepperbush

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	pH 4.5-6.5
Form/Color	Deciduous, grows to 8' tall, flowers white in July-August, fruit dry September-October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Moist to wet woods.	Urban Tolerance:		Tolerant of soil compaction, performs well in the right of way.	
Hydrology:	Tolerant of flooding. Intolerant of drought.	Ecosystem Services:		Wildlife value low, host to some butterfly larvae, twigs eaten by rabbits and deer.	
Ornamental Value:	White flowers in summer, fragrant.	Compatibility:		Can form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:		Tolerates shade but better in gaps and edges.	
Shade Tolerance:	Tolerant of shade.				

Comptonia peregrina

Sweetfern

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.5-6.5
Form/Color	Deciduous, dense, rounded shrub, slow grower to 2-4' tall, 4-8' wide, flowers catkins in May-June.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Grassland, meadows, fields, open woodlands.	Urban Tolerance:		Intolerant of soil compaction, tolerant of poor soils, performs well in the right of way.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	Lustrous leaves, resemble fern frond, fragrant.	Compatibility:		Suckers can form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:		Can be difficult to establish, nitrogen fixer. Sexes on separate plants.	
Shade Tolerance:	Intolerant of shade.				

Cornus alternifolia

Pagoda Dogwood

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 6.5-7.5
Form/Color	Small, deciduous, stratified branching, to 15-25' tall, 20-30' wide, white/yellow and green foliage, off-white flowers in May-June, dark blue fruits in July-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich woods, stream and pond banks, prefers moist soil.	Urban Tolerance:		Moderately tolerant of soil compaction.	
Hydrology:	Moderately tolerant of flooding, intolerant of drought.	Ecosystem Services:		Wildlife value very high, fruit eaten by birds.	
Ornamental Value:	Small cluster of off-white flowers, dark blue fruits, fragrant.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Susceptible to dogwood borer and cottony scales.	
Shade Tolerance:	Tolerant of shade.				

Cornus amomum

Silky Dogwood

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 6.0-8.5
Form/Color	Deciduous, sprawling, grows to 9' tall, flowers white in May-July, blue-white fruit in August-September.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Open freshwater tidal and nontidal marshes, pond edges, flood plain forests, wet habitats.	Urban Tolerance:		Tolerant of concrete debris, moderate disturbance, performs well in the right of way.	
Hydrology:	Tolerant of flooding, moderately tolerant of drought.	Ecosystem Services:		Wildlife value very high, host to some butterfly larvae, fruit eaten by birds, raccoons, skunks, leaves and twigs eaten by deer and rabbits.	
Ornamental Value:	Flowers in white, showy clusters in summer, fleshy blue-white fruit in late summer and fall.	Compatibility:		Branch tips rooting.	
Salt Tolerance:	Intolerant of salt.	Other:		Most common Cornus species in NYC, can be infected by leaf spot in cool, wet summers, wounded plants may be infected by cankers.	
Shade Tolerance:	Intolerant of shade.				

Cornus racemosa

Gray Dogwood

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.0-8.5
Form/Color	Deciduous, moderate grower to 15', flowers white in May-July, white fruit with red stems in July-September.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Moist soil.	Urban Tolerance:		Should tolerate concrete debris, alkaline fill, soil compaction; performs well in the right of way.	
Hydrology:	Moderately tolerant of flooding, drought.	Ecosystem Services:		Wildlife value very high, fruit eaten by many bird species.	
Ornamental Value:	White, showy, flower clusters in summer, fleshy white fruit with red pedicels.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Roots fairly well from cuttings. Also known as Red-Panicled Dogwood.	
Shade Tolerance:	Moderately tolerant of shade.				

Cornus sericea

Red-Osier Dogwood

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 6.0-8.5
Form/Color	Deciduous, grows to 8', flowers white in May-August, white fruit in August-October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Pond and marsh edges.	Urban Tolerance:		Tolerant of concrete debris, performs well in the right of way.	
Hydrology:	Tolerant of swampy conditions, wet soils.	Ecosystem Services:		Fruit eaten by birds, raccoons, skunks, twigs and leaves eaten by rabbits and deer, host to some butterfly larvae.	
Ornamental Value:	Flowers white in showy clusters, fleshy white fruit in late summer and fall. Red stems add winter interest.	Compatibility:		Branch tips rooting.	
Salt Tolerance:	Tolerant of salt.	Other:		Does not reproduce well in New York City, roots well from cuttings.	
Shade Tolerance:	Tolerant of partial shade.				

Corylus americana

American Hazel-Nut

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 6.0-7.5
Form/Color	Deciduous, moderate to fast grower to 9', flowers yellow catkins in March-April, fruit in September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist woods, thickets.	Urban Tolerance:		Moderately tolerant of soil compaction.	
Hydrology:	Moderately tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value moderate, nuts eaten by birds and mammals.	
Ornamental Value:	Yellow catkins in spring, fruit in September.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Dasiphora fruticosa

Shrubby Cinquefoil

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 6.0-8.5
Form/Color	Deciduous, rounded shrub, yellow flowers from June until frost, slow grower to 2-4' tall, 2-4' wide.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Open areas, wet to moist soil.	Urban Tolerance:		Should tolerate concrete debris, tolerant of poor soils, performs well in the right of way.	
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	Bluish-green leaves, bright yellow, white, pink, or red flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Very few pests.	
Shade Tolerance:	Intolerant of shade.				

Diervilla lonicera

Dwarf Bush Honeysuckle

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 6.0-6.5
Form/Color	Deciduous, short-lived, fast grower to 3', flowers yellow to red in June-July, fruit dry in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction.
Habitat:	Dry woods, rocky soil.	Ecosystem Services:	Wildlife value low, flowers attractive to hummingbirds.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Yellow to red flowers in summer.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Epigaea repens

Trailing Arbutus

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 4.5-6.0
Form/Color	Evergreen, creeping mat, grows to 4-6", flowers white or pink in March-May, white fruit, dioecious.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction, roots easily injured, human disturbance causes leaf browning and rot.
Habitat:	Sandy to peaty woods or clearings.	Ecosystem Services:	Wildlife value low, attracts butterflies.		
Hydrology:	Intolerant of flooding, drought.				
Ornamental Value:	Aromatic, leathery leaves, trumpet-shaped white-pale pink flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:	Exploitably vulnerable in New York state, does not tolerate disturbance.		
Shade Tolerance:	Tolerant of shade.				

Eubotrys racemosa

Fetterbush

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.4-6.0
Form/Color	Deciduous, grows to 12', flowers white in May-June, fruit dry September-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Swamp forests, margins of woodland ponds, vernal pools, moist to wet oak woodlands understory.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Wet soil conditions; medium moisture usage.	Ecosystem Services:	Wildlife value low, eaten by deer.		
Ornamental Value:	Small, white flowers in summer.	Compatibility:	Colonial from root sprouts.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Euonymus americanus

Strawberry Bush

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.0-7.5
Form/Color	Deciduous, moderate grower to 7', green twigs, flowers greenish-purple in May-June, fruit a warty capsule.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Moist woods.	Urban Tolerance:	Moderately tolerant of soil compaction.		
Hydrology:	Moderately tolerant of flooding, intolerant of drought.	Ecosystem Services:	Wildlife value low.		
Ornamental Value:	Beautiful red seed capsules burst open to reveal shiny orange seeds. Green stems add interest all winter long.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	It's showy fruits give rise to its other common name bursting-heart.		
Shade Tolerance:	Tolerant of shade.				

Gaultheria procumbens

Eastern Teaberry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-6.5
Form/Color	Slow grower to 6", stoloniferous with creeping horizontal rhizomes, forms a mat, dark green foliage, flowers white to pinkish in spring, red fruit.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Bog, swamp, barrens, dune, forest, old field.	Urban Tolerance:		Tolerant of soil compaction.	
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Wildlife value low, limited use by large and small mammals, and birds.	
Ornamental Value:	White flowers, red fruit.	Compatibility:		Can slowly form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Difficult to transplant.	
Shade Tolerance:	Tolerant of shade, demands partial shade.				

Gaylussacia baccata

Black Huckleberry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 3.9-4.8
Form/Color	Deciduous, very slow grower to 3', flowers white-pinkish in May-June, black fruit in August-September.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Dry, sandy, or rocky oak woods, pine barrens.	Urban Tolerance:		Performs well in the right of way.	
Hydrology:	Moderately tolerant of drought.	Ecosystem Services:		Wildlife value high, fruit eaten by birds and mammals, host to some butterfly larvae.	
Ornamental Value:	White flowers, fleshy black fruit.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Gaylussacia frondosa

Tall Huckleberry

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.5-6.5
Form/Color	Deciduous, very slow grower to 6', flowers white in May-June, blue fruit in August-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse soils, intolerant of anaerobic conditions.
Habitat:	Moist to dry open oak or pine woods.	Ecosystem Services:	Wildlife value high, fruit eaten by birds and mammals, host to some butterfly larvae, pollinated by bumble bees and smaller bees.		
Hydrology:	Sandy, wet soil conditions.				
Ornamental Value:	White flowers, fleshy blue fruit.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Hamamelis virginiana

Witch Hazel

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	pH 6.0-6.5
Form/Color	Deciduous, slow grower to 25', flowers yellow in September-November, fruit dry in autumn of the following year.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Intolerant of soil compaction, performs well in the right of way.
Habitat:	Moist, rich, open woods.	Ecosystem Services:	Seeds eaten by wild turkeys, squirrels, twigs eaten by deer and rabbits; leaves fed on by several insects.		
Hydrology:	Intolerant of flooding, drought.	Compatibility:			
Ornamental Value:	Lemon yellow fall foliage, yellow flowers in fall and interesting fruits that release seeds explosively.	Other:	Susceptible to leaf spot and blight.		
Salt Tolerance:	Intolerant of salt.				
Shade Tolerance:	Tolerant of shade.				

Hudsonia ericoides

Golden Heather

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.1-7.5
Form/Color	Evergreen, mound or mat-forming to 1' or less, flowers yellow in May-June, fruit dry July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Sandy soil of pine barrens, acid, rocky outcrops.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Tolerant of drought.	Ecosystem Services:	Attractive to bees, butterflies, and birds.		
Ornamental Value:	Yellow showy flowers.	Compatibility:	Cannot compete with weedy vegetation in good quality soil.		
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Hudsonia tomentosa

False Heather

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.5-6.9
Form/Color	Evergreen, shrubby, less than 1', flowers yellow in May-June, fruit in June-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Coastal, open sandy soil, back dunes.	Urban Tolerance:	Tolerant of coarse soil, intolerant of anaerobic soils.		
Hydrology:	Tolerant of moderate drought, sandy, moist soil conditions; low moisture usage.	Ecosystem Services:	Attractive to bees, butterflies, and birds.		
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Hypericum prolificum

Shrubby St-John's Wort

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 6.0-8.5
Form/Color	Deciduous, grows to 3', flowers yellow in June-August, fruit dry.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerant of soil compaction, should tolerate concrete debris.	
Habitat:	Swamp margins, cliffs, sandy or rocky soil.	Ecosystem Services:		Wildlife value moderate.	
Hydrology:	Tolerant of flooding, drought.				
Ornamental Value:	Showy yellow flowers in summer.	Compatibility:		Easily shaded out by competing vegetation.	
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Ilex glabra

Inkberry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.5-6.0
Form/Color	Evergreen, slow grower to 6', flowers white in June-July, black fruit in September-November, dioecious.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Tolerant of soil compaction, performs well in the right of way.	
Habitat:	Margins of bogs, swamps of coastal plain and pine barrens, Atlantic white cedar swamps.	Ecosystem Services:		Wildlife value high, fruit eaten by birds, winter cover for small birds, seeds eaten by small mammals, twigs eaten by deer.	
Hydrology:	Tolerant of flooding, intolerant of drought.				
Ornamental Value:	Small, white flowers in summer, black fleshy fruit in the fall.	Compatibility:		Eventually colonial.	
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Ilex verticillata

Winterberry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.5-6.0, tolerates to 8.0
Form/Color	Deciduous, slow grower to 15', flowers white in June-July, red fruit in September-October, dioecious.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Freshwater tidal marshes, shrub swamps, swamp forest, flood plain forests.	Urban Tolerance:		Tolerates soil compaction, performs well in the right of way.	
Hydrology:	Tolerant of flooding, moderately tolerant of drought.	Ecosystem Services:		Wildlife value high, fruit eaten by birds throughout winter, also eaten by small mammals.	
Ornamental Value:	Small white flowers in summer, red fleshy fruit in fall, persisting into the winter.	Compatibility:		Males often colonial.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Iva frutescens

Marsh Elder

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.0-7.5
Form/Color	Grows to 9', usually dies back in winter, flowers greenish in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Coastal, high salt marsh, salt marsh edges.	Urban Tolerance:		Tolerant of concrete debris.	
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Attractive to song birds. Habitat for generalist wetland birds. Secondary nesting habitat for Saltmarsh Sparrows.	
Ornamental Value:	Greenish flowers and fruits.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Juniperus communis

Common Juniper

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.0-8.5
Form/Color	Evergreen, columnar, slow grower to 6', no true flowers, fruit berry-like blue-black cone in October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Sterile, dry, open rocky soil.	Urban Tolerance:		Tolerates concrete debris.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value very high, evergreen cover and food for small birds, fruit eaten by birds.	
Ornamental Value:	Berry-like cone of blue-black fruit. Evergreen foliage.	Compatibility:		Does not tolerate competition from weedy vegetation.	
Salt Tolerance:	Moderately tolerant of salt.	Other:		It has the most extensive worldwide native range of any conifer. Sexes on separate plants.	
Shade Tolerance:	Intolerant of shade.				

Kalmia angustifolia

Sheep Laurel

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.5-6.0
Form/Color	Evergreen, slow grower to 3', flowers pink in May-June, fruit dry in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist, acid, sterile sandy soil, oak or pine woods, barrens, bog edges.	Urban Tolerance:		Tolerant of soil compaction.	
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	Pink showy flowers in early summer.	Compatibility:		Gradually colonial.	
Salt Tolerance:	Intolerant of salt.	Other:		Adapted to fire, attacked by very few insects, leaves infected by several fungi.	
Shade Tolerance:	Tolerant of open shade.				

Kalmia latifolia

Mountain Laurel

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-6.0
Form/Color	Evergreen, slow grower to 9', flowers white in May-July, fruit dry in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Sandy or rocky, oak or pine woods, north-facing slopes, oak forests, pine barrens.	Urban Tolerance:		Intolerant of soil compaction.	
Hydrology:	Moderately tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	White showy flowers in early summer.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Foliage toxic but eaten by deer.	
Shade Tolerance:	Tolerant of shade.				

Lindera benzoin

Spicebush

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.5-7.7
Form/Color	Deciduous, slow grower to 15', flowers yellow in March-April, red fruit September-October, yellow fall foliage, dioecious.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Swamp forests, understory of moist forests.	Urban Tolerance:		Somewhat tolerant of urban pollution, performs well in the right of way.	
Hydrology:	Moderately tolerant flooding, intolerant of drought.	Ecosystem Services:		Wildlife value very high, oily fruit good for migrating birds, host to some butterfly larvae, such as the Spicebush Swallowtail.	
Ornamental Value:	Aromatic leaves, small yellow flowers in early spring before leafing out, red fleshy fruit in fall, fall foliage clear yellow.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		A common plant in New York City, does not grow well in heavy clay soils.	
Shade Tolerance:	Tolerant of shade.				

Lyonia ligustrina

Male-Berry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.0-6.0
Form/Color	Deciduous, moderate grower to 12', flowers white in May-July, fruit dry September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerates soil compaction.	
Habitat:	Swamps, moist to wet open woods, pond edges.	Ecosystem Services:		Wildlife value low.	
Hydrology:	Tolerant of flooding, drought.				
Ornamental Value:	Small white flowers in summer.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Lyonia mariana

Staggerbush

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	pH 4.0-6.0
Form/Color	Grows to 6', flowers white in May-June, fruit dry in September-October into winter.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Performs well in the right of way.	
Habitat:	Moist sandy soil, open oak or pine woods, needs acid soil.	Ecosystem Services:		Attractive to bees.	
Hydrology:	Moist to wet soil conditions.				
Ornamental Value:	White flowers in early summer. Interesting seed heads.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Morella pensylvanica

Northern Bayberry

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.5-7.8
Form/Color	Deciduous, irregular shrub, upright branches, blue-gray fruits in late summer through winter, fast grower to 5-12' tall, 5-8' wide.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Coastal regions.	Urban Tolerance:		Tolerant of infertile soils.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Attracts birds. Primary winter food of yellow-rumped warbler.	
Ornamental Value:	Deep green leaves, blue-gray fruits, fragrant.	Compatibility:		Tends to sucker and form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:		Nitrogen fixer.	
Shade Tolerance:	Intolerant of shade.				

Photinia floribunda

Purple Fruit Chokeberry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.0-6.5
Form/Color	Deciduous, somewhat colonial grower to 12' tall, fall red foliage, flowers white in April-May, dark purple fruit in August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamps, wet woods.	Urban Tolerance:		Tolerant of soil compaction.	
Hydrology:	Tolerant of flooding, moderately tolerant of drought.	Ecosystem Services:		Wildlife value moderate, host to some butterfly larvae.	
Ornamental Value:	White showy flowers in spring, fleshy dark purple fruit in late summer and fall, red fall foliage.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Probably hybrid between P. pyrifolia and P. melanocarpa.	
Shade Tolerance:	Moderately tolerant of shade.				

Photinia melanocarpa

Black Chokeberry

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.0-6.5
Form/Color	Deciduous, slow grower to 6' tall, flowers white in April-May, black fruit in July-October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Swamps, wet woods.	Urban Tolerance:		Tolerant of soil compaction, performs well in the right of way.	
Hydrology:	Tolerant of flooding and drought.	Ecosystem Services:		Wildlife value moderate, host to some butterfly larvae, birds eat fruit, pollinated by native bees and European honeybees.	
Ornamental Value:	White showy flowers in spring, fleshy black fruit in summer and fall.	Compatibility:		Slow colonization rate.	
Salt Tolerance:	Tolerant of salt.	Other:		Not attacked by many insects, infected by quince rust, powdery mildew, leaf spot fungi.	
Shade Tolerance:	Moderately tolerant of shade.				

Photinia pyrifolia

Red Chokeberry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.0-6.5
Form/Color	Deciduous, upright, multi-stemmed shrub, white flowers in spring, bright red to reddish-purple in fall, red fruits, to 6-10' tall, 3-5' wide.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Swamps, wet woods, salt marsh edges, back dune swales.	Urban Tolerance:		Tolerant of soil compaction, performs well in the right of way.	
Hydrology:	Tolerant of flooding, moderately tolerant of drought.	Ecosystem Services:		Wildlife value moderate, fruit eaten by birds, twigs eaten by deer and rabbits, seeds eaten by mice, host to some butterfly larvae. Host of rare precious underwing (<i>Cataoala pretiosa</i>) moth.	
Ornamental Value:	Delicate white flowers in spring, red fall colors, glossy red fruits.	Compatibility:		Can form suckering colony.	
Salt Tolerance:	Tolerant of salt.	Other:		Susceptible to Japanese beetles and leaf spots. Fruit persists in winter.	
Shade Tolerance:	Moderately tolerant of shade.				

Prunus maritima

Beach Plum

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 5.8-7.7
Form/Color	Deciduous, irregular shrub, upright branches, flowers pink in spring, plum colored fruits in August, fast grower to 4-15' tall, 4-15' wide.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Dunes; sandy soil.	Urban Tolerance:		Urban Tolerance:	Tolerant of coarse, medium soils, moderately tolerant of anaerobic soils, performs well in the right of way.
Hydrology:	Tolerant of drought.	Ecosystem Services:		Ecosystem Services:	Attracts bees, fruit is edible.
Ornamental Value:	Pink flowers, plum colored fruit.	Compatibility:		Compatibility:	Tends to sucker and form colonies.
Salt Tolerance:	Tolerant of salt.	Other:		Other:	Pest problems include brown rot, plum curculio, tent caterpillar, and black knot.
Shade Tolerance:	Intolerant of shade.				

Prunus pumila

Sand Cherry

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.9-7.0
Form/Color	Deciduous, branches ascending, grows to 3', flowers white in May-June, black fruit July-September.	Stormwater Tolerance:		Stormwater Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry, rocky woods, acid soil.	Urban Tolerance:		Urban Tolerance:	Tolerant of coarse, medium soils, intolerant of anaerobic soils.
Hydrology:	Tolerant of drought; well-drained, sandy, clay, loamy soil conditions.	Ecosystem Services:		Ecosystem Services:	Attracts bees.
Ornamental Value:	White flowers in summer, black fruit in summer and early fall.	Compatibility:		Compatibility:	
Salt Tolerance:	Intolerant of salt.	Other:		Other:	
Shade Tolerance:	Tolerant of partial shade.				

Quercus ilicifolia

Bear Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.0-7.5
Form/Color	Deciduous, moderate grower to 15', blooms May, acorns ripen September of the following year.	Stormwater Tolerance:		Intolerant of stormwater.	
Habitat:	Dry rocky or sandy, sterile acid soil in oak and pine barrens, coastal scrub, dry, sandy sterile soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value very high, acorns eaten by birds and mammals.	
Ornamental Value:	Blooms in May.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Quercus prinoides

Dwarf Chinkapin Oak

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-8.5
Form/Color	Deciduous, slow grower to 9', blooms in May, acorns ripen September-October of the following year.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry rocky rich soils, slopes, oak barrens.	Urban Tolerance:		Should tolerate concrete debris, intolerant of soil compaction.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value very high.	
Ornamental Value:	Blooms in May.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Rhododendron periclymenoides

Pinkster Azalea

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.2-5.5
Form/Color	Deciduous, slow grower to 6', flowers pink in April-May, fruit dry in September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction.
Habitat:	Moist oak woods, acid soil.	Ecosystem Services:	Wildlife value low.		
Hydrology:	Tolerant of flooding, moderately tolerant of drought.				
Ornamental Value:	Pink showy flowers in spring.	Compatibility:	Gradually colonial.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Rhododendron maximum

White Laurel

Native To:	Regional	Wetland Indicator:	FAC	Soil:	pH 4.5-6.0
Form/Color	Evergreen, grows to 30', flowers white in June-July, fruit dry September-November.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction, disturbance.
Habitat:	Wet to moist woods, Atlantic white cedar bogs, cool, moist, high shade.	Ecosystem Services:	Wildlife value low, winter cover for birds.		
Hydrology:	Tolerant flooding, intolerant of drought.				
Ornamental Value:	White showy flowers in summer.	Compatibility:	Gradually colonial.		
Salt Tolerance:	Very intolerant of salt.	Other:	Damaged by various fungi and insects.		
Shade Tolerance:	Tolerant of shade.				

Rhododendron viscosum

Swamp Azalea

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-6.0
Form/Color	Deciduous, moderate grower to 6', flowers white in June-July, fruit dry September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerant of soil compaction.	
Habitat:	Open swamp forests, bogs.	Ecosystem Services:		Wildlife value low.	
Hydrology:	Moderately tolerant of drought.				
Ornamental Value:	White, showy, fragrant flowers in summer.	Compatibility:		Slow colonization rate.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Rhus aromatica

Fragrant Sumac

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.8-7.2
Form/Color	Deciduous, low-growing, spreading plant, to 2' tall, 6-8' wide, soft red fruit in late summer into winter, often dioecious.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Performs well in the right of way.	
Habitat:	Wooded edges in acid soil.	Ecosystem Services:		Attracts butterflies and bees.	
Hydrology:	Tolerant of drought.				
Ornamental Value:	Fragrant trifoliolate leaves, fiery red autumn color, yellow catkin-like flowers, small red fruits.	Compatibility:		Spreads by root suckers.	
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Rhus copallina

Winged Sumac

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Deciduous, fast grower to 25', fall foliage red, flowers greenish in July-September, red fruit clusters in August-October through winter.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction.
Habitat:	Open, sandy, sterile soil, fill, back dune shrublands.	Ecosystem Services:	Wildlife value high, fruit eaten by birds.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Fall foliage bright red, flowers greenish, showy pink fruit clusters, winged leaves.	Compatibility:	Tolerates weedy vegetation. Can form colonies.		
Salt Tolerance:	Tolerant of salt.	Other:	Common in New York City. Sexes on separate plants.		
Shade Tolerance:	Intolerant of shade.				

Rhus glabra

Smooth Sumac

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Deciduous, grows to 15', red-orange fall foliage, flowers greenish in June-July, red fruit clusters in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction.
Habitat:	Open areas, rich soils, fill, soils.	Ecosystem Services:	Fruit eaten by some birds.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Fall foliage orange-red, flowers greenish, red fruit clusters.	Compatibility:	Tolerates weedy vegetation. Can form colonies.		
Salt Tolerance:	Tolerant of salt.	Other:	Sexes on separate plants.		
Shade Tolerance:	Intolerant of shade.				

Rhus typhina

Staghorn Sumac

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Deciduous, coarse, low spreading branches, moderate grower to 15-25' tall, 15-30' wide, flowers greenish in June-July, red fruit clusters in July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Intolerant of soil compaction.
Habitat:	Open, rocky areas, edges, fill.	Ecosystem Services:	Fruits eaten by gamebirds, songbirds, large and small mammals.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Some cultivars have golden foliage, fiery autumn color, bright crimson upright fruits.	Compatibility:	Tolerates weedy vegetation. Can form colonies.		
Salt Tolerance:	Tolerant of salt.	Other:	Sexes on separate plants.		
Shade Tolerance:	Intolerant of shade.				

Rosa carolina

Pasture Rose

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-8.5
Form/Color	Deciduous, multistemmed, prickly, fast grower to 3', flowers pink in June, red fruit.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Should tolerate concrete debris, some tolerance of soil compaction, performs well in the right of way.
Habitat:	Dry, open areas, old fields, sandy or rocky soil.	Ecosystem Services:	Wildlife value moderate, fruit eaten by birds and mammals.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Pink showy flowers in June, fleshy red fruit.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Rosa palustris

Swamp Rose

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.6-6.5
Form/Color	Deciduous, multistemmed, prickly stems, grows to 6', flowers pink in June-July, red fruit in September-October.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Performs well in the right of way.	
Habitat:	Freshwater tidal and nontidal marshes, pond edges.	Ecosystem Services:		Wildlife value high, fruit eaten by birds.	
Hydrology:	Tolerant of flooding.				
Ornamental Value:	Pink showy flowers, red fleshy fruit.	Compatibility:		Aggressively colonial.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Rosa virginiana

Virginia Rose

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.0-7.0
Form/Color	Deciduous, multi-stemmed, dense shrub, flowers pink with yellow centers in summer, red rose hips throughout winter, to 4-6' tall, 4-6' wide.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Performs well in the right of way.	
Habitat:	Open areas, moist to dry soil, especially sandy areas, back dune scrub.	Ecosystem Services:		Eaten by birds.	
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Pink flowers with yellow centers, red rose hips.	Compatibility:		Will sucker and spread quickly.	
Salt Tolerance:	Tolerant of salt.	Other:		Very disease resistant.	
Shade Tolerance:	Moderately tolerant of shade.				

Rubus allegheniensis

Common Blackberry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-7.5
Form/Color	Stout, curved, sharp prickles, fast grower stems to 6', flowers white in May-July, black fruit in August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wide tolerance in soils and moisture, grows in fill soils.	Urban Tolerance:		Moderately tolerant of soil compaction, tolerates poor soil.	
Hydrology:	Moderately tolerant of flooding, drought.	Ecosystem Services:		Wildlife value very high, fruit eaten by birds and mammals.	
Ornamental Value:	White flowers in summer, black fruit in summer and early fall.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Roots well from cuttings.	
Shade Tolerance:	Tolerant of open, partial shade.				

Rubus flagellaris

Dewberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-7.0
Form/Color	Deciduous, grows to about 1', stems arching, prickles stout, sharp, flowers white in June-July, black fruit in July-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open soil, fill, weedy sites.	Urban Tolerance:		Tolerant of concrete debris.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Fruit and seeds eaten by birds and small mammals.	
Ornamental Value:	Trailing vine or groundcover. Flowers white in summer, black fleshy fruit in late summer.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Rubus hispidus

Bristly Dewberry

Native To: New York City **Wetland Indicator:** FACW **Soil:** pH 4.5-7.0

Form/Color: Moderate grower to 2', flowers white, gray-green foliage, black fruit. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Moist thickets, open woods, clearings. **Urban Tolerance:** Adapted to coarse, medium and fine soils, low tolerance of soil compaction.

Hydrology: Moderately tolerant of drought. **Ecosystem Services:** Food for songbirds, game birds, and mammals.

Ornamental Value: Trailing delicate vine or ground cover. White flowers, red to black fruit. **Compatibility:** Can form colonies.

Salt Tolerance: Intolerant of salt. **Other:**

Shade Tolerance: Intolerant of shade.

Rubus idaeus

Red Raspberry

Native To: New York City **Wetland Indicator:** UPL **Soil:** pH 5.0-7.5

Form/Color: Deciduous, moderate grower, stems to 2', slender-based prickles, flowers white-greenish, red fruit. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Swamps, bogs, recently disturbed sites. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Tolerant of drought. **Ecosystem Services:** Food and cover for birds, mammals.

Ornamental Value: White-greenish flowers. **Compatibility:**

Salt Tolerance: Intolerant of salt. **Other:**

Shade Tolerance: Tolerant of shade.

Rubus occidentalis

Black Raspberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.5-6.5
Form/Color	Deciduous, fast grower to 4', prickly, bluish stems, flowers white in May-June, black fruit in June-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Moderately tolerant of soil compaction.
Habitat:	Open areas, edges, part shade, open woodlands, rich acid soil.	Ecosystem Services:	Wildlife value very high, fruit eaten by birds and mammals.		
Hydrology:	Tolerant of drought, moderately tolerant of flooding.				
Ornamental Value:	Bluish-purple stems providing good winter color, white flowers in early summer, black fruit in summer.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:	Grows poorly in full shade, not as common as <i>Rubus allegheniensis</i> .		
Shade Tolerance:	Moderately tolerant of shade.				

Rubus odoratus

Flowering Raspberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-6.0
Form/Color	Deciduous, fast grower to 6', unarmed, flowers purple in July-August, red fruit in August-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Moderately tolerant of soil compaction.
Habitat:	Moist part shade, rocky woodland edges.	Ecosystem Services:	Wildlife value very high, fruit eaten by birds and mammals.		
Hydrology:	Moderately tolerant of drought, intolerant of flooding.				
Ornamental Value:	Purple showy flowers, red fleshy fruit.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Rubus pensilvanicus

Pennsylvania Blackberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.7-7.6
Form/Color	Purple canes to 10' long, stout prickles, flowers white in May-June, black fruit in July-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Thickets, woodland edges, successional habitats.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderately tolerant of drought.	Ecosystem Services:		Fruit eaten by birds and mammals.	
Ornamental Value:	Canes can be reddish in color, white flowers, black fleshy fruit.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:					

Sambucus canadensis

Elderberry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 6.0-8.0
Form/Color	Deciduous, fast grower to 12', flowers white in June-July, black fruit in July-September, forms thickets.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Freshwater tidal and nontidal marshes, wet edges, shrub swamps.	Urban Tolerance:		Tolerant of soil compaction, probably tolerant of concrete debris.	
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Wildlife value very high, fruit eaten by birds, mammals.	
Ornamental Value:	White, showy, clusters of flowers, black fleshy fruit.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Will not bloom or fruit in dense shade.	
Shade Tolerance:	Moderately tolerant of partial shade.				

Spiraea alba var. latifolia

Meadowsweet

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	pH 6.6-7.5
Form/Color	Deciduous, fast grower to 6', flowers white in June-August, fruit dry September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerant of soil compaction.	
Habitat:	Moist wet open uplands, rocky slopes, meadows.	Ecosystem Services:		Wildlife value moderate, host to some butterfly larvae.	
Hydrology:	Tolerant of flooding, drought.				
Ornamental Value:	White, showy, clusters of flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Roots fairly well from cuttings, attacked by the Spiraea aphid, Spiraea leaf roller moth, and the Spiraea scale.	
Shade Tolerance:	Intolerant of shade.				

Spiraea tomentosa

Hardhack

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.0-6.0
Form/Color	Deciduous, fast grower to 5', flowers pink in July-September, fruit dry in September-October.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Tolerant of soil compaction, performs well in the right of way.	
Habitat:	Open swamps, wet meadows, rocky, acid, sterile soil.	Ecosystem Services:		Wildlife value moderate, host to some butterfly larvae.	
Hydrology:	Tolerant of flooding, drought.				
Ornamental Value:	Pink, showy, clusters of flowers.	Compatibility:		Colonial from root sprouts.	
Salt Tolerance:	Intolerant of salt.	Other:		Roots fairly well from cuttings, affected by same insects and fungi of Spiraea alba.	
Shade Tolerance:	Intolerant of shade.				

Staphylea trifolia

Bladder-Nut

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.0-8.0
Form/Color	Deciduous, moderate grower to 15', striped bark, flowers white in May, fruit dry in September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Forest understories, edges in moist, often rocky soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderately tolerant of drought, flooding.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	Striped bark. Yellow, balloon-like hanging fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Symphoricarpos albus

Common Snowberry

Native To:	Regional	Wetland Indicator:	FACU-	Soil:	pH 6.0-7.8
Form/Color	Deciduous, grows to 3', shreddy bark, flowers white in May-July, white fruit in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Edges, degraded woodlands.	Urban Tolerance:		Tolerant of coarse, medium, and fine soils, intolerant of anaerobic soil.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Food and shelter for birds, mammals.	
Ornamental Value:	White flowers and fruit.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Infected by a powdery mildew, leaves attacked by leafmining fly larva.	
Shade Tolerance:	Tolerant of shade.				

Symphoricarpos orbiculatus

Coralberry

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.5-7.5
Form/Color	Deciduous, to 5', shreddy bark, dark blue/green foliage, flowers greenish-purplish in June-August, fruit red to purplish.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Edges of woods.	Urban Tolerance:		Tolerant of urban pollution.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Attractive to birds.	
Ornamental Value:	Dark bluish green leaves, red to purplish fruit, greenish and purplish flowers.	Compatibility:			
Salt Tolerance:	Low tolerance of salt.	Other:		Also known as indiancurrant.	
Shade Tolerance:	Tolerant of shade.				

Vaccinium angustifolium

Lowbush Blueberry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.0-6.0
Form/Color	Deciduous, slow grower to 2', flowers white in May-June, blue fruit in August-September.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Sandy or rocky soil, open oak woods, needs acid soil.	Urban Tolerance:		Intolerant of soil compaction, performs well in the right of way.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Fruit eaten by birds and mammals, twigs eaten by many birds and mammals.	
Ornamental Value:	Low-growing shrub. White flowers in summer, blue fleshy fruits in late summer.	Compatibility:		Eventually colonial.	
Salt Tolerance:	Tolerant of salt.	Other:		Susceptible to blueberry witches'-broom rust.	
Shade Tolerance:	Tolerant of light shade.				

Vaccinium corymbosum

Highbush Blueberry

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 3.5-6.5
Form/Color	Deciduous, slow grower to 9', flowers white in May-June, blue fruit in July-August, red foliage in fall.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction.
Habitat:	Swamps edges, moist upland forests, shrub swamps.	Ecosystem Services:	Wildlife value very high, host to some butterfly larvae, fruit eaten by birds and mammals.		
Hydrology:	Tolerant of flooding, moderately tolerant of drought.	Compatibility:			
Ornamental Value:	Red fall foliage, fleshy blue fruit in July-August, white, small flowers in May-June.	Other:	Grown commercially for fruit, susceptible to canker and dieback disease.		
Salt Tolerance:	Moderately tolerant of salt.				
Shade Tolerance:	Tolerant of partial shade.				

Vaccinium pallidum

Early Low Blueberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 3.9-5.0
Form/Color	Deciduous, slow grower to 3', flowers white in May-July, blue fruit in August-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open, oak woods, sandy, acid soil, prefers deep humus.	Ecosystem Services:	Wildlife value very high, fruit eaten by birds and mammals.		
Hydrology:	Moist to droughty soil conditions; medium moisture usage.	Compatibility:	Can form colonies.		
Ornamental Value:	Low-growing shrub. White flowers in summer, blue fleshy fruits in late summer.	Other:			
Salt Tolerance:	Insufficient information to determine tolerance.				
Shade Tolerance:	Tolerant of partial shade.				

Vaccinium stamineum

Deerberry

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 4.0-6.5
Form/Color	Deciduous, slow grower to 5', flowers greenish-white in May-June, yellowish to blue fruit in July-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist open oak woods, pine barrens.	Urban Tolerance:		Moderately tolerant of soil compaction.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value high, fruit eaten by birds, host to some butterfly larvae, like the red-spotted purple butterfly.	
Ornamental Value:	Flowers greenish-white in summer, fleshy yellowish to blue fruit in late summer/early fall.	Compatibility:		Eventually colonial.	
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Viburnum acerifolium

Maple-Leaved Viburnum

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 3.9-6.0
Form/Color	Deciduous, to 7', usually 3-4', pinkish-purple fall foliage, flowers white in May-June, black fruit in August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Understory of moist to moderately dry forests, with oak, beech, hickory, maple, prefers deep humus.	Urban Tolerance:		Moderately tolerant of soil compaction.	
Hydrology:	Moderately tolerant of drought, intolerant of flooding.	Ecosystem Services:		Wildlife value high, fruit eaten by overwintering birds, host to some butterfly larvae.	
Ornamental Value:	Fall foliage pinkish-purple, white flowers in showy clusters, black fleshy fruit.	Compatibility:		Eventually colonial.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Viburnum dentatum

Arrow-Wood

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 3.9-7.0
Form/Color	Deciduous, multistemmed, moderate grower to 10', flowers white in June-July, dark blue fruit in August-October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Swamps, freshwater tidal and nontidal marshes, pond edges, swamp forest gaps moist to wet soil.	Urban Tolerance:		Moderately tolerant of soil compaction, performs well in the right of way.	
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Wildlife value high, fruit eaten by mammals and birds, host to some butterfly larvae.	
Ornamental Value:	White, showy, clusters of flowers in summer, fleshy dark blue fruit in late summer and fall.	Compatibility:		Can form colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:		Common in New York City. Attacked by Viburnum leaf beetle.	
Shade Tolerance:	Moderately tolerant of shade.				

Viburnum lentago

Nanny-Berry

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.0-8.5
Form/Color	Deciduous, forms thickets, fast grower to 30', often a small tree, flowers white in May-June, black fruit in August-October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Open woods, edges, rich, moist soil.	Urban Tolerance:		Intolerant of soil compaction, should tolerate concrete debris.	
Hydrology:	Tolerant of drought, tolerant of flooding.	Ecosystem Services:		Wildlife value high, host to some butterfly larvae, fruit eaten by birds.	
Ornamental Value:	White, fragrant, showy clusters of flowers, black fleshy fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Roots fairly well from cuttings.	
Shade Tolerance:	Moderately tolerant of shade.				

Viburnum opulus var. americanum

Highbush Cranberry

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 5.5-7.5
Form/Color	Deciduous, grows to 13', reddish new leaves, yellow to red fall foliage, flowers white in May, red fruit.	Stormwater Tolerance:			Potentially tolerant of stormwater.
Habitat:	Hedges, scrub, woodland, damp soils.	Urban Tolerance:			Very tough, soil adaptable, performs well in the right of way, tolerant of varied soils.
Hydrology:	Intolerant of drought.	Ecosystem Services:			Attracts butterflies.
Ornamental Value:	Yellow to red fall foliage, white flowers, red fleshy fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Viburnum prunifolium

Black-Haw

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.0-8.5
Form/Color	Deciduous, to 15', small tree, flowers white in April-May, black fruit in September-October.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Open woods, open habitats, edges.	Urban Tolerance:			Should tolerate concrete debris, intolerant of soil compaction.
Hydrology:	Tolerates drought, intolerant of flooding.	Ecosystem Services:			Wildlife value high, host to some butterfly larvae, fruit eaten by birds and mammals.
Ornamental Value:	White, showy, clusters of flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Very slow grower.
Shade Tolerance:	Somewhat tolerant of partial, open shade.				

Vines:

Vines can be selected to screen unsightly structures, climb trees and gently drape banks of shrubs or cover the ground plane. Consider the forms of specified plants to avoid introducing species that will smother other plants.

Apios americana

Groundnut

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 6.0-7.5
Form/Color	Herbaceous, twining vine, flowers brownish purple-pink in July-September, fruit dry in September-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse, medium, and fine soils, high tolerance of soil compaction.
Habitat:	Marshes, moist woods, edges.	Ecosystem Services:	Attractive to butterflies. Seeds eaten by some birds.		
Hydrology:	Low drought tolerance.				
Ornamental Value:	Brownish purple-pink flowers.	Compatibility:	Can be aggressive and difficult to control in well-manicured environment.		
Salt Tolerance:	Intolerant of salt.	Other:	Nitrogen fixer can help improve sterile soil.		
Shade Tolerance:	Tolerant of partial shade.				

Celastrus scandens

American Bittersweet

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 6.1-7.5
Form/Color	Woody climbing vine, to 25', flowers greenish in May-June, fruit bright orange berry in October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Moderately tolerant of soil compaction.
Habitat:	Moist to dry woodlands. Climbs fences and trees.	Ecosystem Services:	Berries eaten by birds. Leaves eaten by rabbits.		
Hydrology:	Found in sandy or rocky soil. Drought tolerant.				
Ornamental Value:	Orange berries.	Compatibility:	Can climb other trees and shrubs, sometimes damaging them. Not as aggressive as the invasive Oriental bittersweet.		
Salt Tolerance:	Tolerant of salt.	Other:	Fast grower.		
Shade Tolerance:	Tolerant of partial shade.				

Clematis occidentalis

Purple Clematis

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 6.0-8.5
Form/Color	Woody climbing vine, to 6', moderate to fast grower, flowers violet in May-June, fruit dry July-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rocky, limestone woods and slopes.	Urban Tolerance:		Tolerant of concrete debris. Intolerant of soil compaction.	
Hydrology:	Moderately tolerant of drought. Intolerant of flooding.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	Violet flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Has poisonous leaves. Needs limestone (calcareous) soil.	
Shade Tolerance:	Tolerant of shade.				

Clematis virginiana

Virgin's Bower

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.0-8.5
Form/Color	Deciduous, twining, flowering vine, 12-20' high, fast grower, white flowers in July-August, fruit dry September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Low woods. Climbs trellises, fences, rock walls, and other structures.	Urban Tolerance:		Tolerant of concrete debris and soil compaction.	
Hydrology:	Moist to wet soil. Tolerant of drought and flooding.	Ecosystem Services:		Minor element for increased diversity.	
Ornamental Value:	Small white fragrant flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Leaves may be irritating. Needs limestone (calcareous) soil.	
Shade Tolerance:	Tolerant of partial shade.				

Dioscorea villosa

Wild Yam

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	pH 5.0-6.0
Form/Color	Herbaceous, slender, twining vine to 15', thin reddish-brown stems, broad heart shaped leaves with deep veins, flowers small, green in June-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open thickets, woods, wetland edges, roadsides.	Ecosystem Services:			
Hydrology:	Moist soils, low tolerance to drought.				
Ornamental Value:	Small green flowers. Persistent winged fruits. Flowers vanilla scented.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Related to the tropical Yam found in grocery stores, but does not produce edible tubers.	
Shade Tolerance:	Tolerant of shade.				

Lonicera dioica

Limber Honeysuckle

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 6.0-8.5
Form/Color	Shrub or woody climber to 9', moderate to fast grower, flowers bright yellow May-June, red fleshy fruit July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of concrete debris. Moderately tolerant of soil compaction.
Habitat:	Moist, rocky woods.	Ecosystem Services:	Moderate wildlife value. Attractive to hummingbirds.		
Hydrology:	Tolerant of drought. Moderately tolerant of flooding.	Compatibility:			
Ornamental Value:	Bright yellow flowers and red, fleshy fruit.	Other:		Needs limestone (calcareous) soil.	
Salt Tolerance:	Tolerant of salt.				
Shade Tolerance:	Tolerant of shade.				

Lonicera sempervirens

Trumpet Honeysuckle

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.0-7.5
Form/Color	Deciduous, flowering, twining vine, 10-20' in height at maturity, bright flowers in yellow, pink, red, and orange in May throughout summer, red fleshy fruit in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open woods edges, woodlands. Support by trellis, arbor, or fence.	Urban Tolerance:		Moderately tolerant of soil compaction.	
Hydrology:	Grows best in moist soil. Tolerant of drought. Intolerant of flooding.	Ecosystem Services:		Attractive to hummingbirds. Fruit eaten by songbirds. Moderate wildlife value.	
Ornamental Value:	Bright flowers in yellow, pink, red, and orange, leaves have silver undersides, red fleshy fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Best flowering in full sun. Tolerant of partial shade.				

Menispermum canadense

Moon Seed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-7.5
Form/Color	Woody climber or ground cover to 12', very fast grower, flowers whitish in June-July, fleshy blue-black fruit in September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist rich woods, edges, open uplands.	Urban Tolerance:		Tolerant of soil compaction.	
Hydrology:	Tolerant of flooding. Moderately tolerant of drought.	Ecosystem Services:		High wildlife value.	
Ornamental Value:	Whitish flowers. Blue-black fleshy fruit.	Compatibility:		Can form colonies. Sprawls over other vegetation.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Poisonous fruit. Needs or tolerates acidic soils.	
Shade Tolerance:	Tolerant of partial shade.				

Mikania scandens

Climbing Hempweed

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.7-7.5
Form/Color	Herbaceous, twining vine, stems to 17' long, dull purple flowers in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium and fine soils, moderate tolerance of soil compaction.
Habitat:	Wet soil, swamps, stream margins, marshes.	Ecosystem Services:	Minor species for increased diversity. Attractive to honeybees, bumblebees, and other native bees		
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Purple flowers.	Compatibility:	Can be aggressive in high nutrient soils. Climbs over shrubs.		
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Parthenocissus quinquefolia

Virginia Creeper

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.8-7.0
Form/Color	Woody climber to 35', ground cover, tiny, dull yellow flowers in June-July, blue-black fleshy fruit with red stems in September-October.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Tolerant of soil compaction.
Habitat:	Woods, edges, back dunes scrub.	Ecosystem Services:	High wildlife value, fruit eaten by songbirds and mammals, foliage eaten by rabbits.		
Hydrology:	Tolerant of flooding and drought.				
Ornamental Value:	Good fall color. Dull yellowish flowers. Blue-black fruit with red stems.	Compatibility:	Can form colonies.		
Salt Tolerance:	Moderately tolerant of salt.	Other:	Used for slope stabilization. Vegetation of fills. Needs or tolerates acidic soils.		
Shade Tolerance:	Tolerant of shade.				

Smilax herbacea

Carrion Flower

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.1-7.8
Form/Color	Herbaceous, unarmed climber to 7', yellowish flowers in May-June, blue fleshy fruit July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist rich woods, flood plains.	Ecosystem Services:	Fruit eaten by birds and mammals, stems eaten by rabbits and deer.		
Hydrology:	Moist soil conditions.				
Ornamental Value:	Yellowish flowers, blue fleshy fruit.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Strophostyles helvola

Trailing Wild Bean

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	Not Available.
Form/Color	Annual, herbaceous, twining vine to 3', flowers pink-purple, becoming greenish in July-September, fruit dry in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry to moist sandy soil, often on cinders, open woods, old fields.	Ecosystem Services:	Attractive to butterflies.		
Hydrology:	Sandy soil. Moderately tolerant of drought.				
Ornamental Value:	Delicate pink-purple flowers become greenish.	Compatibility:	Can be aggressive.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Nitrogen fixer can help improve sterile soil.		
Shade Tolerance:	Tolerant of partial shade.				

Vitis aestivalis

Summer Grape

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.3-7.0
Form/Color	Woody, high climber, flowers greenish in June-July, small dark purple fleshy fruit in September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist woods, edges, thickets, and streambanks.	Ecosystem Services:		Fruit eaten by birds and mammals, secondary species for wildlife food and shelter along roadsides and edges.	
Hydrology:	Tolerant of drought.				
Ornamental Value:	Greenish flowers. Small, dark purple fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Revegetation of fill, can be used for sites.	
Shade Tolerance:	Tolerant of partial shade.				

Vitis labrusca

Fox Grape

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.5-7.5
Form/Color	Woody, high climber to 35', very fast grower, greenish flowers in June-July, fleshy dark purple fruit September-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerant of soil compaction.	
Habitat:	Edges, thickets, woods, moist soil.	Ecosystem Services:		Very high wildlife value, fruit eaten by birds and mammals, secondary species for wildlife food and shelter along roadsides and edges.	
Hydrology:	Tolerant of flooding. Moderately tolerant of drought when established.				
Ornamental Value:	Greenish flowers. Fleshy dark purple fruit.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Will not bloom or fruit in shade.	
Shade Tolerance:	Tolerant of shade.				

Vitis riparia

River Grape

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 6.0-8.5
Form/Color	Woody, high climber to 35', very fast grower, greenish flowers in June, black fleshy fruit in August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist to wet rich soil of edges, stream margins, and flood plains.	Urban Tolerance:		Tolerant of soil compaction and concrete debris.	
Hydrology:	Tolerant of flooding and drought.	Ecosystem Services:		Eaten by birds and mammals, provides moderate shelter.	
Ornamental Value:	Greenish flowers. Dark fleshy fruit.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Needs limestone (calcareous) soil.	
Shade Tolerance:	Tolerant of shade.				

Vitis vulpina

Frost Grape

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.0-7.5
Form/Color	Woody, high climbing vine to 83', tiny white flowers, black fruit, moderate grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Woods, thickets.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Low drought tolerance.	Ecosystem Services:		Eaten by birds and mammals.	
Ornamental Value:	Black fruit.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Forbs:

Forbs can add visual interest to the ground plane of a designed landscape as well as habitat for wildlife. Careful consideration of ornamental qualities, longevity, and reproductive facility can extend the period of interest and ensure adequate vegetative cover.

Acorus americanus

Sweet flag

Native To:	Regional	Wetland Indicator:	OBL	Soil:	pH 5.6-7.2
Form/Color	Aromatic, alternating, grasslike leaves; yellow-brown flowers on 5-10 cm long spike; produces small, hard berries May-August.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Quiet pond and lake margins, marshes.	Urban Tolerance:		Performs well in the right of way.	
Hydrology:	Intolerant of drought; high moisture usage.	Ecosystem Services:		Provides habitat and food for small mammals and songbirds.	
Ornamental Value:	Yellow-brown flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Moderate lifespan.	
Shade Tolerance:	Intolerant of shade.				

Actaea pachypoda

White Baneberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Perennial, grows to 1' to 3', flowers white in terminal racemes, May-June. flowers white in May-June, white berries.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Ravines, rich thick woods.	Urban Tolerance:		Somewhat tolerant of urban pollution.	
Hydrology:	Moist well-drained soil.	Ecosystem Services:		Wildlife value low, attractive to beetles, berries eaten by some birds and mice.	
Ornamental Value:	White flowers and clusters of white globular fruit. Known for its ornamental fruits which look like doll's eyes.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Exploitably vulnerable in New York state, plant is toxic.	
Shade Tolerance:	Tolerant of shade.				

Actaea racemosa

Black Baneberry

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH < 6.8
Form/Color	Perennial, large, compound basal leaves, grows to 5-6', flowers white racemes 1-3' high in June-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Somewhat tolerant of urban pollution.
Habitat:	Rocky woods, ravines, creek margins, thickets, deciduous forests, moist meadowlands.	Ecosystem Services:	Attractive to beneficial insects, songbirds, and host to Appalachian blue and spring azure butterflies.		
Hydrology:	Tolerant of drought.				
Ornamental Value:	Terminal cluster of small white flowers are held above divided leaves.	Compatibility:	Grows well with other woodland plants.		
Salt Tolerance:	Moderately tolerant of salt.	Other:	Slow to establish.		
Shade Tolerance:	Tolerant of shade.				

Agalinis purpurea

Purple False Foxglove

Native To:	New York City	Wetland Indicator:	FACW-	Soil:	Acidic soils.
Form/Color	Annual, grows to 4', simple to branched stems, dark seeds, round capsule fruit.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist to wet open soils.	Ecosystem Services:	Attractive to several bee species, butterflies, and beetles.		
Hydrology:	Moist soil.				
Ornamental Value:	Large pink bell shaped flowers grow close to the axils of this annual. The spreading form is dotted with small linear leaves all along the stems.	Compatibility:	Thrives with occasional disturbance to eliminate some competing vegetation.		
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Agastache scrophulariifolia

Purple Giant Hyssop

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Single stem growing to 3-5'; purple irregular flowers bloom July-September; dry-seeded achenes.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry upland woodlands.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist to dry soil conditions.	Ecosystem Services:		Attracts hummingbirds and butterflies.	
Ornamental Value:	One of the tallest mints. Terminal spikes of purple-red flowers are held atop purplish stems with opposite leaves.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Ageratina altissima

White Snakeroot

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.1-6.5
Form/Color	Single stem growing to 5', flowers white in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist forests.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Attracts butterfly species and birds.	
Ornamental Value:	White inflorescence throughout fall.	Compatibility:		Can spread aggressively by rhizomes.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Somewhat weedy, poisonous if ingested.	
Shade Tolerance:	Tolerant of partial shade.				

Alisma subcordatum

Water Plantain

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-7.0
Form/Color	Perennial emergent aquatic, grows to 4', triangular flower stem, flowers white in July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium and fine soils, high tolerance of soil compaction, tolerates moderate disturbance.
Habitat:	Shallow water, edges of open ponds, swamps.	Ecosystem Services:	Wildlife value moderate.		
Hydrology:	Intolerant of drought, water depth to 1' or saturated soil.				
Ornamental Value:	Leaves in a basal rosette with small white flowers held on long branched stems in summer. Dense rings of dry seeds give the overall plant a gold to bronze hue.	Compatibility:	Colonial from rhizomes.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Allium canadense

Meadow Garlic

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.6-7.5
Form/Color	Perennial succulent grass-like form grows to 8-24", flowers white-pink in May-June.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist, open areas.	Ecosystem Services:	Attractive to some bees and butterflies, avoided by rabbits and deer.		
Hydrology:	Tolerant of some drought.				
Ornamental Value:	Grass-like leaves with a strong onion odor surround a flowering stalk with a cluster of star-like white-pink flowers.	Compatibility:	Does not compete well with taller forbs. Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Smells strongly of onion or garlic.		
Shade Tolerance:	Tolerant of partial shade.				

Allium triococcum

Wild Leek

Native To:	New York City	Wetland Indicator:	FACU+	Soil:	pH 6.8-7.2
Form/Color	Succulent grass-like spring ephemeral, flower stalks appear after leaves die back, flowers white in June-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Forest interior, rich woods.	Ecosystem Services:			
Hydrology:	Moist to wet soil conditions.				
Ornamental Value:	Pairs of glossy green leaves appear in spring before the flower stalk. White flowers form in umbrella-shaped cluster and produce black seeds.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Needs at least 0.5% full sunlight but no more than 20% full sunlight.				

Anaphalis margaritacea

Pearly Everlasting

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 6.0-7.5
Form/Color	1' to 3' high, white flowers; stem and underside of leaves white wooly, July - September, fast grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry open sites.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Medium textured soils; medium drought tolerance; medium moisture usage.				
Ornamental Value:	Cotton-like appearance. White pearly bracts surround a yellow center in the cluster of flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Minor species for increased diversity and aesthetics in restoration of open habitats, dry grasslands, meadows, sandy fill.		
Shade Tolerance:	Moderately tolerant of shade.				

Anemone canadensis

Canadian Anemone

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 6.8-7.2
Form/Color	Perennial, grows to 2'; white flowers bloom May-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Sandy shores, wet meadows.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Moderately drought tolerant, prefers moist sandy soil.	Ecosystem Services:	Attracts butterflies and insects.		
Ornamental Value:	White flowers.	Compatibility:	Can be aggressive in favorable conditions. Can be colonial.		
Salt Tolerance:	Tolerant of salt.	Other:	Used for increased diversity and aesthetics in wetland restoration and mitigation.		
Shade Tolerance:	Tolerant of partial shade.				

Anemone quinquefolia

Wood Anemone

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.0-6.0
Form/Color	Perennial, spring ephemeral, grows to 8", solitary basal leaf, flowers white in April-May.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Rich, moist, open woods.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Prefers moist soil, tolerant of drought.	Ecosystem Services:			
Ornamental Value:	Early spring flowering in large, low-lying patches. Foliage is finely divided with delicate five-petaled white flowers.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Poisonous if ingested.		
Shade Tolerance:	Tolerant of shade.				

Anemonella thalictroides

Rue Anemone

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH < 6.8
Form/Color	8"; white flowers bloom April-May; produces fruit May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium, well-drained soil; tolerant of drought.	Ecosystem Services:			
Ornamental Value:	This tiny spring perennial reaches only 8 inches tall. Delicate five-petaled white flowers are held above small leaves that resemble meadow-rue leaves.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Minor species for increased diversity and aesthetics in restoration of moist woodland habitats.	
Shade Tolerance:	Tolerant of shade.				

Antennaria neglecta

Field Pussytoes

Native To:	Regional	Wetland Indicator:	NI	Soil:	pH 5.5-7.5
Form/Color	Perennial single stem growing to 1'; white flowers bloom in May-July; slow grower.	Stormwater Tolerance:		Intolerant of stormwater.	
Habitat:	Dry fields, sterile meadows, sandy fill.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry soil conditions; fine and medium textured soil; low drought tolerance.	Ecosystem Services:		Attracts birds and butterflies. Host of painted lady butterfly.	
Ornamental Value:	Creates groundcover of white, hairy, rounded basal leaves. Flowering heads are dense and turn a fluffy white when in seed.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Minor species for increasing diversity and aesthetics in restoration of dry, open habitats, dry grasslands, meadows.	
Shade Tolerance:	Intolerant of shade.				

Apocynum cannabinum

Indian hemp

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-7.0
Form/Color	Perennial, grows to 4', red in full sun, flowers whitish in terminal clusters in May-September.	Stormwater Tolerance:		Intolerant of stormwater.	
Habitat:	Open areas, fill, edges, roadsides, vacant lots, meadows.	Urban Tolerance:		Tolerates fill, vacant lots, nutrient poor soil, concrete debris, moderate tolerance of soil compaction.	
Hydrology:	Moderate tolerance to drought.	Ecosystem Services:		Attractive to butterflies, host to some butterfly larvae.	
Ornamental Value:	Reddish purple stems and long oval leaves. White flowers grow in clusters and produce long skinny pods that turn brown and fluffy when mature.	Compatibility:		Can compete with mugwort. Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Contains various toxins.	
Shade Tolerance:	Moderately tolerant of shade.				

Aquilegia canadensis

Wild Columbine

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Acidic and alkaline soils.
Form/Color	Perennial, grows to 6.5', flowers red and yellow in May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rocky, undisturbed woods.	Urban Tolerance:		Somewhat tolerant of urban pollution.	
Hydrology:	Tolerant of drought, well-drained soil.	Ecosystem Services:		Attractive to hummingbirds and bees.	
Ornamental Value:	Finely divided blue green foliage lays low beneath a flowering stem. Showy red and yellow flowers nod with long spurs pointing upward.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Arabis canadensis

Sicklepod

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-7.0
Form/Color	Biennial to 40", winter rosette evergreen, flowers cream-white in May-July, fruits in August-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Rocky banks, rich woods, thickets.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Prefers mesic to dry conditions.	Ecosystem Services:	Attractive to bees and flies.		
Ornamental Value:	Small cream-white flowers on long stalks line a thin stem. Long drooping sickle-shaped pods form covering papery seeds.	Compatibility:			
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Aralia nudicaulis

Wild Sarsaparilla

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.4-7.2
Form/Color	Perennial, grows to 15", dioecious, flowers tiny, whitish in May-July, blackish fruit in July-August, dioecious.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Undisturbed, moist forest understories.	Urban Tolerance:	Adapted to coarse, medium, and fine soils, no tolerance of soil compaction.		
Hydrology:	Moderate tolerance to drought.	Ecosystem Services:	Attractive to bumble bees, other bees, and syrphid flies, fruits eaten by some birds and mammals.		
Ornamental Value:	Single leaf stalks divide with oval leaflets. Whitish flowers in round clusters. Purple to black round berries.	Compatibility:	Frequently forms colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Aralia racemosa

Spikenard

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.1-7.8
Form/Color	Perennial, grows to 6.5', widely branched, large leaves, flowers white in June-August, dark purple fruit.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Undisturbed forest understories, moist to moderately dry soil.	Ecosystem Services:	Fruit eaten by a few birds and mammals.		
Hydrology:	Tolerant of drought, prefers moist soil.				
Ornamental Value:	Large compound leaves with aromatic, white flowers in branched clusters. Purple red berries follow in fall.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Arisaema triphyllum

Jack-in-the-pulpit

Native To:	New York City	Wetland Indicator:	FACW-	Soil:	pH 4.0-7.0
Form/Color	Perennial, slow grower to 2', brown-purple spathe arches over whitish spadix, red fruit.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse and medium soils, moderate tolerance of soil compaction.
Habitat:	Undisturbed moist woods, swamp forests, edges in good soil.	Ecosystem Services:	Fruit eaten by birds, foliage eaten by pheasants.		
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Brown-purple to green spathe arches over a white spadix. Oval cluster of red berries.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	May change sex seasonally, susceptible to rust fungus.		
Shade Tolerance:	Moderately tolerant of shade.				

Asarum canadense

Wild Ginger

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Perennial, very slow grower to 8", round-cordate dark green leaves, flowers at base of stems.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Forest interior, rich, moist soil.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Intolerant of drought.	Ecosystem Services:	Eaten by the pipevine swallowtail butterfly.		
Ornamental Value:	Low-growing perennial with heart shaped leaves. Velvety stem hides solitary dark red-brown flower.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Spreads very slowly.		
Shade Tolerance:	Very tolerant of shade.				

Asclepias incarnata

Swamp Milkweed

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-8.0
Form/Color	Perennial, single-stemmed, slow grower to 5', leafy stems, flowers pink in July-August, narrow fruit pods.	Stormwater Tolerance:	Tolerant of stormwater.		
Habitat:	Open, undisturbed wet areas, marshes, pond edges.	Urban Tolerance:	Adapted to medium and fine soils, high tolerance of soil compaction, performs well in the right of way.		
Hydrology:	Tolerant of drought and periodic flooding.	Ecosystem Services:	Wildlife value high, attractive to butterflies, bees, wasps. As with other milkweeds, host to monarch butterfly.		
Ornamental Value:	Small rose-purple flowers with reflexed petals clustered in an inflorescence atop a thick stem. Long pointed seed pods fluff out when ripe.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:	Occasionally attacked by chrysomelid beetles, monarch butterfly larvae, and some aphids.		
Shade Tolerance:	Intolerant of shade.				

Asclepias syriaca

Common Milkweed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.6-7.5
Form/Color	Perennial, single-stemmed, grows to 6.5', stout, hairy stem, umbrella-shaped inflorescence, flowers muddy mauve.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of fill soils, disturbance, concrete debris.
Habitat:	Open areas, roadsides, fill, abandoned lots.	Ecosystem Services:	Attractive to bees, wasps, flies, butterflies, moths, eaten by monarch butterfly larvae, curculionid and cerambycid beetles, lygaeid bugs.		
Hydrology:	Tolerant of drought.				
Ornamental Value:	Large ball shaped drooping flowers that are pink-brown and fragrant. Wide oval leaves and green seed pods with warts will split and fluff out when mature.	Compatibility:	Can form colonies. Often found with dogbane and common aster.		
Salt Tolerance:	Intolerant of salt.	Other:	Sap is toxic, attacked by aphids, parasitized by several fungi.		
Shade Tolerance:	Needs at least 30% full sun.				

Asclepias tuberosa

Butterfly Weed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.8-6.8
Form/Color	Perennial, single-stemmed, grows to 2', flowers orange in July-August, in umbels.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Adapted to coarse and medium soils, no tolerance of soil compaction, performs well in the right of way.
Habitat:	Open, undisturbed, upland areas.	Ecosystem Services:	Attractive to bees, butterflies, seedlings eaten by rabbits.		
Hydrology:	High tolerance to drought.				
Ornamental Value:	Showy orange flowers radially symmetrical. Narrow lanceolate leaves line the stem and excrete a milky-sap when damaged.	Compatibility:	Not a good competitor in dense vegetation, easily shaded out by other plants.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Baptisia tinctoria

Yellow Wild Indigo

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.8-7.0
Form/Color	Perennial, grows to 3', sometimes mounding, freely branched, flowers yellow, in short, unbranched clusters in June-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse and medium soils, no tolerance of soil compaction.
Habitat:	Dry, open areas, sandy soil.	Ecosystem Services:	Moderately palatable by browse animals, host to some butterfly species.		
Hydrology:	High tolerance to drought.				
Ornamental Value:	Small rounded, blue-green foliage in threes along thin green stems. Yellow flowers at tips of branches. Seed pods turn black and rattle when mature.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Leaves are black when dead, nitrogen fixer.		
Shade Tolerance:	Tolerant of partial shade.				

Bidens frondosa

Beggar Ticks

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.2-7.2
Form/Color	Annual, grows to 4', purple stems, flowers yellow in June-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse and medium soils, moderate tolerance of soil compaction.
Habitat:	Wet, open areas, fields, edges, disturbed soil.	Ecosystem Services:	Seeds eaten by birds, plant eaten by rabbits.		
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Yellow flower heads without rays can reach up to 4 ft tall. The distinctive seeds are flat and awned, hitchhiking with all those that pass it by.	Compatibility:	Can be weedy.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Boehmeria cylindrica

False Nettle

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.1-7.0
Form/Color	Perennial, grows to 3', dioecious, stem erect and opaque, flowers green/white in rounded clusters, female flowers in slender clusters.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet to moist shady areas, swamp forests, flood plains, edges, stream corridors.	Urban Tolerance:		Adapted to medium and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Host to mourning cloak butterfly larvae, question mark butterfly, and comma butterfly.	
Ornamental Value:	Large toothed leaves hang below tiny green flowers that grow on spikes from the leaf axils.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Similar in form to stinging nettle.	
Shade Tolerance:	Tolerant of shade.				

Cakile edentula

American Searocket

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Circumneutral soils.
Form/Color	Annual, grows to 32", succulent leaves, flowers pale purple to white in June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Coastal, primary dunes, upland of high high-tide line.	Urban Tolerance:		Tolerant of gravelly, rocky, sandy soils.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Attractive to bees and other insects.	
Ornamental Value:	Succulent stems with shallow toothed leaves and pale purple to white flowers. Rocked-shaped seed pods turn a pale yellow when ripening.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Caulophyllum thalictroides

Blue Cohosh

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.5-7.0
Form/Color	Perennial, grows to 32", stems and leaves waxy-pale, flowers yellow-green or purplish in April-June, blue seeds.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Adapted to medium soils, low tolerance of soil compaction.	
Habitat:	Interior, moist forests, rich woods.	Ecosystem Services:		Attractive to bees.	
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Yellow-green to purplish flowers and globe-like blue fruits covered with a whitish bloom. Foliage has lobed leaflets and is purplish in the spring.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Plant poisonous, leaves live 20 weeks.	
Shade Tolerance:	Needs at least 1% sunlight, but no more than 30% full sun.				

Chamaesyce polygonifolia

Seaside Sandmat

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Annual, widely branching, prostrate, forms mat, flowers in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dunes, beaches, sandy soil.	Ecosystem Services:		Attractive to small bees and flies, seeds eaten by birds.	
Hydrology:	Prefers mesic to dry conditions.				
Ornamental Value:	Spreading with red stems and small flowers. Rounded seed pods develop on the ends of the branching stems.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Chelone glabra

Turtlehead

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH<6.8
Form/Color	Perennial, grows to 3' tall, flowers white to pinkish in July-August.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Performs well in the right of way.	
Habitat:	Open marshes, open swamp forest.	Ecosystem Services:		Host for some butterfly species, including Baltimore checkerspot butterfly, attractive to hummingbirds.	
Hydrology:	Tolerant of wet soil.				
Ornamental Value:	White to pinkish tubular flowers bunched in a terminal cluster atop a stem of long narrow dark opposite green leaves.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Exploitably vulnerable in New York state.	
Shade Tolerance:	Tolerant of shade.				

Chrysopsis mariana

Maryland Goldenaster

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Grows to 32", fruits and flowers yellow in August-November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Sandy soil, open woods.	Ecosystem Services:			
Hydrology:	Wet to moist soil conditions.				
Ornamental Value:	Stems and leaves that are slightly hairy with a purplish tinge. Yellow asters bloom in late summer. Attractive fluffy seed heads persist throughout the fall.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Claytonia virginica

Spring Beauty

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.0
Form/Color	Perennial, spring ephemeral, grows to 7", several flowering stems, flowers pinkish-white in April-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Understory of moist forests, sometimes in lawns and hedgerows.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Rich, moist soil conditions.	Ecosystem Services:		Attractive to bees, flies, seeds eaten by mice.	
Ornamental Value:	This delicate spring ephemeral has showy pinkish-white flowers and long narrow smooth leaves.	Compatibility:		Very colonial in nature. Often found with trout-lily.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Collinsonia canadensis

Horse Balm

Native To:	New York City	Wetland Indicator:	FACW-	Soil:	pH 6.0-7.0
Form/Color	Perennial, grows to 3', egg-shaped leaves, flowers pale yellow in July-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Woodland herb of moist or wet soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium moisture usage.	Ecosystem Services:			
Ornamental Value:	Flowers and foliage have a distinct lemon or citronella scent. Wide oval leaves line the stems. Small yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Conoclinium coelestinum

Blue Mistflower

Native To:	Regional	Wetland Indicator:	FAC	Soil:	pH 5.5-7.5
Form/Color	Perennial, grows to 3.2'; single-stem; blue flowers bloom in September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wood margins, stream banks, low woods, wet meadows, ditches.	Ecosystem Services:		Attracts butterflies and birds.	
Hydrology:	Fine and medium textured soil; medium drought tolerance.				
Ornamental Value:	Blue flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Corydalis sempervirens

Pink Corydalis

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-6.0
Form/Color	Wintergreen, annual or biennial, grows to 2', pale foliage, waxy-green, flowers pink/yellow in May-June, fruit in June-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry rocky woodlands.	Ecosystem Services:			
Hydrology:	Dry soil conditions.				
Ornamental Value:	Bluish-green foliage is very delicate and lacy. Pink and yellow tubular dangling flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Cryptotaenia canadensis

Canada Honewort

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	Perennial, grows to 3.3', shiny, unbranched stem, flowers white, black and dark Gray striped fruit.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist to wet, rich woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist soil conditions.	Ecosystem Services:		Attractive to butterfly species.	
Ornamental Value:	Irregular umbels of flowers with ascending white rays. Three-parted toothed leaves line the stem and distinctive narrow seeds split in two.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Decodon verticillatus

Swamp-loosestrife

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.9-8.6
Form/Color	Perennial, grows to 4', flowers pink-purple in July-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, shallow water, saturated soils of ponds and sunny vernal pools.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, high tolerance of soil compaction.	
Hydrology:	Intolerant of drought.	Ecosystem Services:		Attractive to bees, butterflies, wasps.	
Ornamental Value:	Sessile pink-purple flower clusters. Arching leafy stems can become woody and root at the tip.	Compatibility:		Extensively colonial.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Desmodium canadense

Showy Tick-Trefoil

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	Perennial, grows to 6.5', one to several stems, flowers rose-purple to blue in July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist, open woods, edges.	Ecosystem Services:	Seeds eaten by some birds and mammals, host to some butterfly species.		
Hydrology:	Dry to moist soil conditions.				
Ornamental Value:	Large rose-purple pea like flowers make this the showiest species of the Genus. Velvet hairs cover the stems and leaves and the plant can get quite bushy.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Seeds stick to fur and clothing, nitrogen fixer.		
Shade Tolerance:	Tolerant of partial shade.				

Desmodium paniculatum

Panicled Tick-Trefoil

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Perennial, grows to 3', slender, erect, several stems from base, flowers pinkish In July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium and fine soils, no tolerance of soil compaction.
Habitat:	Dry woods and edges.	Ecosystem Services:	Host to larvae of orange sulfur butterfly.		
Hydrology:	Moderate tolerance to drought.				
Ornamental Value:	Slender, pinkish flowers line long stems with narrow lanceolate leaves in threes.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Seeds stick to fur and clothing, nitrogen fixer.		
Shade Tolerance:	Moderately tolerant of shade.				

Dicentra cucullaria

Dutchman's Breeches

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Perennial, spring ephemeral, grows to 6", pale blue-green plant with dark blotches, flowers white-yellowish in April-May, foliage disappears by mid-May.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist forests.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Intolerant of flooding, intolerant of drought.	Ecosystem Services:		Attractive to bees, ants.	
Ornamental Value:	Blue-green fern-like foliage. Rows of nodding white-yellow flowers line a thin stem.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Doellingeria umbellata

Parasol Whitetop

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.0-6.0
Form/Color	Herbacious perennial; wide flat-top cluster of white flowers bloom August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist thickets, swamp edges, woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Loamy, sandy soil; moist to wet.	Ecosystem Services:		Attracts butterflies and bees.	
Ornamental Value:		Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Equisetum hyemale

Scouring Rush Horsetail

Native To:	Regional	Wetland Indicator:	FACW	Soil:	Acidic soils.
Form/Color	Evergreen chambered stalk growing to 4'; no flowers; densely colonial.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open or partly shaded areas in moist to wet sandy soil, shady stream margins.	Urban Tolerance:		Tolerates wide range of soil, performs well in the right of way.	
Hydrology:	Moist, wet sandy soil.	Ecosystem Services:			
Ornamental Value:		Compatibility:		Aggressive spreader.	
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Erigeron pulchellus

Robin's Plantain

Native To:	Regional	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Well-branched aster with erect stem growing to 20"; violet to whitish flowers bloom May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, open woods, meadows, streambanks.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist soil conditions.	Ecosystem Services:		High wildlife value.	
Ornamental Value:	Numerous narrow rays of violet to white make up the inflorescence. Basal leaves are paddle shaped, soft and hairy.	Compatibility:			
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Erythronium americanum

Trout Lily

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-6.0
Form/Color	Perennial, spring ephemeral, grows to 8", pale blue-green plant with dark blotches, flowers yellow.	Stormwater Tolerance:		Intolerant of stormwater.	
Habitat:	Undisturbed moist woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist, rich soil conditions.	Ecosystem Services:		Attractive to bees, seeds eaten by mice, birds, insects.	
Ornamental Value:	Yellow, bell-shaped flowers with darker spots, blue-green plant.	Compatibility:		Extensively colonial.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Eupatorium altissimum

Tall Boneset

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Circumneutral soils.
Form/Color	Perennial, grows to 31"-6.5', stems solitary or paired, very leafy, flowers white in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, open woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist to dry soils.	Ecosystem Services:		Attractive to bees, wasps, butterflies, plant eaten by caterpillars.	
Ornamental Value:	White flowers throughout the fall.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Eupatorium perfoliatum

Common Boneset

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	Not Available.
Form/Color	Perennial, grows to 4', most parts very hairy, flowers dull white in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open wet areas, marsh edges, wet roadsides.	Ecosystem Services:	Attractive to bees, wasps, butterflies, plant eaten by caterpillars.		
Hydrology:	Moist to wet soil conditions.				
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Eupatorium serotinum

Late Eupatorium

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	Not Available.
Form/Color	Perennial, grows to 1-6.5', stems Grayish-purple, flowers dull pinkish-white in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist to dry open areas, sandy soil, fill.	Ecosystem Services:	Seeds eaten by some birds.		
Hydrology:	Moist soil conditions; medium moisture usage.				
Ornamental Value:	Pinkish-white flowers in heads of 9-15 flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Eurybia divaricata

White Wood Aster

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 6.8-7.2
Form/Color	2.5"; herbaceous perennial; white with yellow/red centers bloom August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry to medium moisture conditions; well-drained soil; tolerates drought.	Ecosystem Services:		Attracts butterflies; seeds eaten by birds.	
Ornamental Value:	Showy white flowers in late summer to early fall.	Compatibility:		Can form colonies. Can be aggressive in the right environment.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Euthamia caroliniana

Slender Goldentop

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	Herbaceous perennial; yellow flowers bloom August-November; deciduous.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist, marshy, sandy areas.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist soils.	Ecosystem Services:			
Ornamental Value:	Yellow flowers bloom in late fall.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of light shade.				

Euthamia graminifolia

Lance-Leaved Goldenrod

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	Perennial, grows to 1-5', ray flowers yellow in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of poor, gravelly, sandy, or dry soils.
Habitat:	Open areas, dry to moist soil of meadows, roadsides and path edges.	Ecosystem Services:	Seeds eaten by some birds and small mammals, foliage eaten by rabbits, flowers eaten by Blister beetles. `		
Hydrology:	Tolerant of drought.				
Ornamental Value:	Yellow flowers.	Compatibility:	Leaf extracts have inhibited seed germination in other plants, may displace other species if left unmanaged.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Eutrochium dubium

Three-Nerved Joe-Pye Weed

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Acidic soils.
Form/Color	Perennial, grows to 15-40", stems have purple speckles, flowers dull purple in July-September.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Performs well in the right of way.
Habitat:	Open moist sandy, gravelly acidic soil, wet woods, edges.	Ecosystem Services:	Eaten by some birds, host for some butterfly species.		
Hydrology:	Medium moisture usage.				
Ornamental Value:	Purple flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Eutrochium maculatum

Spotted Joe Pye Weed

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Circumneutral to alkaline soils.
Form/Color	2-10'; Perennial; clusters of pink to purplish flowers blooms July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist soil along shores.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Moist soil conditions.				
Ornamental Value:	Pink, purplish flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Eutrochium purpureum

Sweetscented Joe Pye Weed

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Alkaline soils.
Form/Color	Herbaceous perennial; grows to 7'; pink and purple flowers blooms July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Low moist ground; wooded slopes; wet meadows; thickets; stream margins.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Average to medium moisture soil conditions.				
Ornamental Value:	Showy, fragrant pink and purple flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Fragaria virginiana

Wild Strawberry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Perennial, low growing to about 6", winter-green, flowers white, red fruit with small seeds in fruit surface, fruits in June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Low vegetation, fields or open woods, good soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry soil conditions.	Ecosystem Services:		Fruit eaten by songbirds, pheasants, and mammals, foliage eaten by rabbits, deer, and other herbivores.	
Ornamental Value:	Red fruit in summer.	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of light shade.				

Geranium maculatum

Wild Geranium

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.4-5.6
Form/Color	Perennial, grows to 15", flowers pink-purple in loose clusters in April-June.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Undisturbed moist to dry woods, good soil.	Urban Tolerance:		Performs well in the right of way.	
Hydrology:	Tolerant of drought; medium moisture usage.	Ecosystem Services:		Seeds eaten by birds and small mammals, foliage eaten by deer.	
Ornamental Value:	Pink-purple clusters of flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Geum canadense

White Avens

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-7.5
Form/Color	Perennial, evergreen, grows to 3', flowers white with petals longer than sepals, upper stem and leaves hairy.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Woods, part shaded edges, meadows in moist to dry soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry to moist soil conditions; medium moisture usage.	Ecosystem Services:			
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Helenium autumnale

Common Sneezeweed

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.0-7.5
Form/Color	Perennial, grows to 20-60", flowers yellow in August-October.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Rich, moist thickets, shores.	Urban Tolerance:		Performs well in the right of way.	
Hydrology:	Medium to wet moisture soil conditions.	Ecosystem Services:			
Ornamental Value:	Yellow flowers in the fall.	Compatibility:			
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Helenium flexuosum

Southern Sneezeweed

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	Not Available.
Form/Color	Perennial, grows to 8-47", branched inflorescence, numerous flower heads, flowers yellow in June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist, open habitats.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium to wet moisture soil conditions.	Ecosystem Services:			
Ornamental Value:	Yellow flowers throughout fall.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Helianthemum canadense

Longbranch Frostweed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Grows to 16", flowers yellow in May-July, fruits in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, sandy soil, wooded edges, barrens.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Sandy, loamy, well-drained soil; dry to moist soil.	Ecosystem Services:			
Ornamental Value:	Showy yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Helianthus decapetalus

Thin-Leaved Sunflower

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Perennial, grows to 5', rough textured, yellow rays in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open woods, rich, moist soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry or moist soil.	Ecosystem Services:		Seeds eaten by birds and small mammals.	
Ornamental Value:	Yellow flowers in fall.	Compatibility:		Colonial from rhizomes.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Helianthus divaricatus

Woodland Sunflower

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-7.0
Form/Color	Perennial, grows to 5', waxy-pale stem, yellow rays in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, thin woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry to medium moisture conditions.	Ecosystem Services:		Seeds eaten by birds and small mammals, attractive to butterfly species.	
Ornamental Value:	Yellow flowers.	Compatibility:		Colonial from rhizomes.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Helianthus giganteus

Tall Sunflower

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Not Available.
Form/Color	Perennial, grows to 9', usually hairy, flowers yellow in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Wet woods, rich thickets, marshes, wooded swamps.	Ecosystem Services:			
Hydrology:	Moist to wet soil conditions.				
Ornamental Value:	Yellow flowers throughout fall.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Heliopsis helianthoides

Smooth Oxeye

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.6-6.8
Form/Color	3-5' tall, branching occasionally and becoming rather bushy in open situations. Opposite dark green leaves have a rough texture. July -September.	Stormwater Tolerance:	Potentially tolerant of stormwater.	Urban Tolerance:	Performs well in the right of way.
Habitat:	Dry, open woods, dry banks.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Dry to moderately moist soil conditions; tolerates drought.				
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Used for increased diversity and aesthetics in restoration of open woodlands, edges. Also known as false sunflower.		
Shade Tolerance:	Tolerant of partial shade.				

Hibiscus moscheutos

Rose-Mallow

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-7.5
Form/Color	Perennial, slow grower to 3-7', flowers pink to white in July-September.	Stormwater Tolerance:	Tolerant of stormwater.		
Habitat:	Open marshes, undisturbed wet ditches, pond edges, tolerates brackish water.	Urban Tolerance:	Performs well in the right of way.		
Hydrology:	Low drought tolerance; moist to wet soil conditions; high water usage.	Ecosystem Services:	Host to some butterfly species, attractive to hummingbirds.		
Ornamental Value:	Very showy pink to white flowers.	Compatibility:	Often in small colonies.		
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Hieracium venosum

Rattlesnake Weed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Perennial, grows to 3', reddish-purple midrib and veins, flowers yellow in May-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Open, rocky, dry woods.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Dry soil conditions.	Ecosystem Services:			
Ornamental Value:	Yellow flowers, attractive foliage.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Hydrophyllum virginianum

Virginia Waterleaf

Native To: New York City **Wetland Indicator:** FAC **Soil:** pH 6.0-7.0

Form/Color: Perennial, grows to 30", usually low, sprawling, flowers pale violet to white in clusters in May-June. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Moist to wet, open woods, stream banks. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Moist soil conditions. **Ecosystem Services:**

Ornamental Value: Pale violet to white flowers. **Compatibility:** Can form colonies.

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of shade.

Hypericum hypericoides

St. Andrew's Cross

Native To: New York City **Wetland Indicator:** FACU **Soil:** Not Available.

Form/Color: 1-3'; perennial; yellow flowers bloom June-September. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Dry woods, pine barrens; sand hills; ridges; floodplains, **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Dry to moist soil conditions. **Ecosystem Services:**

Ornamental Value: Yellow flowers. **Compatibility:**

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of partial shade.

Impatiens capensis

Jewelweed

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.6-7.0
Form/Color	Annual, grows to 5', stem succulent, flowers orange in June-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamp forests, shady or open marsh, stream edges, moist woods.	Ecosystem Services:		Seeds eaten by birds and mice, flowers attractive to hummingbirds.	
Hydrology:	Moist to wet. Not drought tolerant.				
Ornamental Value:	Showy orange flowers.	Compatibility:		Often forms dense monocultures.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Ionactis linariifolius

Flaxleaf Whitetop Aster

Native To:	New York City	Wetland Indicator:	NI	Soil:	Acidic soils.
Form/Color	Perennial, herbacious; white, yellow, blue and purple flowers bloom August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry clearings, rocky banks.	Ecosystem Services:			
Hydrology:	Dry to moist soil conditions.				
Ornamental Value:	Blue and purple flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Iris prismatica

Slender Blue Flag

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Not Available.
Form/Color	Perennial, grows to 8-30", leaves have reddish bases, flowers blue-violet in June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Undisturbed marshes, swamp forests, salt marsh edges, mostly coastal.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist soil conditions, tolerant of saturated soil.	Ecosystem Services:		Attractive to hummingbirds.	
Ornamental Value:	Showy blue-violet flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Iris versicolor

Large Blue Flag

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Acidic soils.
Form/Color	Perennial, slow grower to 32", often forms large clumps, leaves usually purple at base, flowers blue-violet in May-July.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Undisturbed marshes, pond edges, swamp forest gaps, freshwater and brackish tidal marshes.	Urban Tolerance:		Performs well in the right of way.	
Hydrology:	Tolerant of flooding or saturated soil.	Ecosystem Services:		Flowers attractive to hummingbirds, insects, and birds.	
Ornamental Value:	Showy blue-violet flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade but will not flower.				

Krigia virginica

Virginia Dwarf Dandelion

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Annual, slender, grows to 12", basal rosette forming leaves, flowers yellow in May-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to mesic, sandy soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry, well-drained soil.	Ecosystem Services:			
Ornamental Value:	Yellow flowers, similar in appearance to dandelions.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Leaves and flowering stems contain a white latex.	
Shade Tolerance:	Intolerant of shade.				

Lechea maritima

Beach Pinweed

Native To:	New York City	Wetland Indicator:	NI	Soil:	Acidic soils.
Form/Color	Red flowers bloom June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dunes, beaches; sandy soils.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry, well-drained soil. Drought tolerant.	Ecosystem Services:			
Ornamental Value:	Red flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Lechea mucronata

Pinweed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	Perennial, grows to 32", one or few flowering stems, brownish-purple, flowers reddish in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, dry woods, fields, sandy or gravelly soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry, well-drained soil.	Ecosystem Services:			
Ornamental Value:	Small reddish flowers throughout fall, reddish brown stems throughout winter.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Lespedeza capitata

Round-Headed Bush-Clover

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Acidic soils.
Form/Color	Perennial, single stem, grows to 5', flowers dull white with purple spot at base.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open fields, sandy soil, tolerates sterile soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry, well-drained soil conditions.	Ecosystem Services:		Seeds eaten by birds, plants eaten by deer.	
Ornamental Value:	Dull white flowers with purple at the bases.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Nitrogen fixer.	
Shade Tolerance:	Tolerant of partial shade.				

Lespedeza hirta

Hairy Bush Clover

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.7-8.2
Form/Color	Perennial, grows to 5', flowers pea-flower-shaped, yellowish-white with purple base in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry open rocky or sandy soil, open woods, fields.	Ecosystem Services:	Seeds eaten by birds, plants eaten by deer, host to some butterfly species.	Compatibility:	
Hydrology:	Sandy, dry soil conditions; low moisture usage.	Other:	Nitrogen fixer.		
Ornamental Value:	Pea-flower-shaped flowers in yellowish-white with purple base.				
Salt Tolerance:	Intolerant of salt.				
Shade Tolerance:	Tolerant of partial shade.				

Liatis spicata

Dense Blazing Star

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 5.6-7.5
Form/Color	Grows to 4.5, rhizomatous; showy, purple flowers bloom August-September.	Stormwater Tolerance:	Tolerant of stormwater.	Urban Tolerance:	Tolerant of poor soil, performs well in the right of way.
Habitat:	Dry, open woods, gaps.	Ecosystem Services:	Attracts butterflies.	Compatibility:	
Hydrology:	Fine and medium textured soils; low drought tolerance.	Other:	Used for increased diversity and aesthetics in restoration of open woodlands, on dry, rocky or sandy soils.		
Ornamental Value:	Purple flowers.				
Salt Tolerance:	Low tolerance of salt.				
Shade Tolerance:	Moderately tolerant of shade.				

Lilium superbum

Turk's Cap Lily

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.4-5.0
Form/Color	Perennial, grows to 8', flowers orange in July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist to wet forests.	Ecosystem Services:	Attractive to hummingbirds, bulbs may be eaten by voles and muskrats.		
Hydrology:	Low drought tolerance; moist, loamy, sandy soil; medium moisture usage.				
Ornamental Value:	Orange flowers, petals curled back.	Compatibility:	Sparingly colonial.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Limonium carolinianum

Sea Lavander

Native To:	New York City	Wetland Indicator:	NI	Soil:	Not Available.
Form/Color	Grows to 1'; herbaceous perennial; branching cluster of small, pale, purple flower bloom June-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Salt marshes.	Ecosystem Services:			
Hydrology:	Moist clay, loamy, sandy soil; high moisture use.				
Ornamental Value:	Pale purple flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Lobelia cardinalis

Cardinal Flower

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.5-7.0
Form/Color	Perennial, single stem, slow grower to 20-60", flowers scarlet in July-September.	Stormwater Tolerance:			Tolerant of stormwater.
		Urban Tolerance:			Performs well in the right of way.
Habitat:	Swamp forests and marshes.	Ecosystem Services:			Flowers attractive to hummingbirds, host to some butterfly species.
Hydrology:	Tolerant of flooding.				
Ornamental Value:	Showy scarlet flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Lobelia siphilitica

Great Lobelia

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	Not Available.
Form/Color	Perennial, single stem, grows to 20-60", flowers blue in August-September.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Insufficient information to determine tolerance.
Habitat:	Open marshes, swamp forests.	Ecosystem Services:			
Hydrology:	Low drought tolerance; moist to wet clay, loamy, sandy soil conditions.				
Ornamental Value:	Showy blue flowers in late summer.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			Spreads easily from seed.
Shade Tolerance:	Tolerant of shade.				

Ludwigia alternifolia

Seed Box

Native To: New York City **Wetland Indicator:** FACW+ **Soil:** Not Available.

Form/Color: Perennial, grows to 4', flowers yellow in July-August. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Open marshes, moist to wet forest edges. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Wet to moist soil. **Ecosystem Services:**

Ornamental Value: Yellow flowers. **Compatibility:**

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of partial shade.

Lycopus americanus

Water Horehound

Native To: New York City **Wetland Indicator:** OBL **Soil:** pH 5.2-7.8

Form/Color: Perennial, single stem, grows to 35", flowers white in June-September. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Open or part-shaded wet soil, ditches, swamp forests, pond edges, wet roadsides. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Intolerant of drought, tolerant of flooding. **Ecosystem Services:**

Ornamental Value: White flowers. **Compatibility:** Tolerant of competition. Colonial from rhizomes.

Salt Tolerance: Low tolerance of salt. **Other:**

Shade Tolerance: Tolerant of partial shade.

Lysimachia ciliata

Fringed Loosestrife

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 6.8
Form/Color	24"-30"; narrowly egg-shaped stem leaves; five-petaled yellow flowers bloom June-July; round fruit capsule; fast grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist to well-drained soils; swamps, partial shade in undisturbed woods; floodplains.	Ecosystem Services:	Attracts butterflies and other insects.		
Hydrology:	Drought tolerant.				
Ornamental Value:	Yellow flowers June to July.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increasing diversity and aesthetics of wetland restoration and mitigation; used for erosion control.		
Shade Tolerance:	Tolerant of shade.				

Lysimachia quadrifolia

Whorled Loosestrife

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 4.8-5.0
Form/Color	3'; yellow flowers bloom June-August; fruit August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open woods, gaps, edges.	Ecosystem Services:	Attracts butterflies and insects.		
Hydrology:	Suited best for dry uplands.				
Ornamental Value:	Yellow flowers June to August.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increasing diversity and restoration of aesthetics of open woodlands, gaps, and edges.		
Shade Tolerance:	Tolerant of partial shade.				

Maianthemum canadense

Canada Mayflower

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.4-5.4
Form/Color	Grows to 8"; white flowers develop May-June, flowering stalks usually only have two leaves, fleshy red fruit ripen from June to July.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Moist, beech, oak, or conifer woods.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Moist to wet; prefers humus-rich soil.	Ecosystem Services:	Provides valuable cover.		
Ornamental Value:	Red fruit, delicate white flowers.	Compatibility:	Frequently forms colonies.		
Salt Tolerance:	Moderately tolerant of salt.	Other:	A common understory plant, frequently found with Solomon's seal, false Solomon's seal, sessile-leaved bellwort, wild sarsparilla.		
Shade Tolerance:	Very tolerant of shade.				

Maianthemum racemosum

False Solomon's Seal

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH < 6.8
Form/Color	Grows to 32"; single stem, white flowers bloom May-June; fleshy, speckled red fruit September-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Frequent in New York City woodlands; mixed deciduous forests.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Drought tolerant.	Ecosystem Services:	Dispersed by small mammals and birds.		
Ornamental Value:	White flowers, berries.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increased diversity and aesthetics in restoration of moist forest understories.		
Shade Tolerance:	Tolerant of shade.				

Maianthemum stellatum

Star-flowered Solomon's Seal

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.9
Form/Color	Grows to 2'; single stem, white 1 cm wide flowers bloom May to July; green with blackish stripes, three-lobed fruit ripens to red June-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist, sandy, gravelly, open forests, floodplains, margins of seasonal or temporary streams and flooded areas, moist swales, in black dune forests.	Ecosystem Services:			
Hydrology:	Dry to moist soil conditions.				
Ornamental Value:	White flowers May-July, berries.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:	Used in restoration and mitigation of wetland in sandy soil, coastal woodlands. Slow to moderate grower.		
Shade Tolerance:	Tolerant of partial shade.				

Mimulus ringens

Monkey Flower

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Not Available.
Form/Color	Grows to 3': pink-purple flowers bloom July-August; fruit August-September;	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Swamp forests, shady stream banks, wet meadows.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Medium to wet moisture conditions.				
Ornamental Value:	Attractive foliage and pink- purple flowers July to August.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Common name refers to resemblance of the flower to a monkey's face when it is squeezed by the fingers.		
Shade Tolerance:	Tolerant of partial shade.				

Mitchella repens

Partridge Berry

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.0
Form/Color	Low-growing groundcover; 8"; white flowers bloom June-July; fleshy red fruit develop August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, moist to dry woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry to moist soil conditions.	Ecosystem Services:		Eaten by birds and small mammals.	
Ornamental Value:	White flowers June-July,	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for increasing diversity and aesthetics in restoration of moist forest understories.	
Shade Tolerance:	Tolerant of shade.				

Monarda fistulosa

Wild Bergamot

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-8.0
Form/Color	Grows to 4'; lilac or pink flowers bloom July-September; fruit develops August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Upland, open woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Intolerant of drought; high moisture usage.	Ecosystem Services:		Attracts hummingbirds, bees, and butterflies.	
Ornamental Value:	Lilac or pink flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Monarda punctata

Spotted Beebalm

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.8-7.2
Form/Color	Grows to 3'; yellow flowers with purple spots bloom July-October; fruit develops September-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry, open, sandy soil.	Ecosystem Services:	Provides low amount of food for large mammals; attractive to hummingbirds and a host for butterfly species.	Compatibility:	
Hydrology:	Tolerates drought; dry to moist soil conditions.				
Ornamental Value:	Yellow flowers with purple spots.				
Salt Tolerance:	Moderately tolerant of salt.	Other:	Used for increased diversity and aesthetics in restoration of dry grasslands and meadows of coastal plains.		
Shade Tolerance:	Intolerant of shade.				

Nuttallanthus canadensis

Blue Toadflax

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	2'; pale blue flowers bloom April-May; fruits develops June-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open, sterile, sandy; maritime grassland or shrubland, forests, sandy fields; dry or poor soils.	Ecosystem Services:	Provides low amount of cover for large mammals.	Compatibility:	
Hydrology:	Prefers dry to moist conditions; tolerant of drought.				
Ornamental Value:	Pale blue flowers.				
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increased diversity and aesthetics in restoration of open sand barren and coastal grassland habitat; helps with erosion control.		
Shade Tolerance:	Intolerant of shade.				

Oenothera biennis

Common Evening Primrose

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.0-7.0
Form/Color	Yellow flower bloom in late spring to early fall; fast grower.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Common in open, disturbed areas, vacant lots, fill, and roadsides.	Urban Tolerance:		Performs well in the right of way.	
Hydrology:	Medium drought tolerance; medium moisture usage.	Ecosystem Services:		Seeds eaten by birds.	
Ornamental Value:	Yellow flowers.	Compatibility:		Can become weedy.	
Salt Tolerance:	Intolerant of salt.	Other:		Short lifespan.	
Shade Tolerance:	Intolerant of shade.				

Oenothera fruticosa

Sundrops

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.5-7.0
Form/Color	Grows to 1'-3'; slender, hairy stems; alternating elliptic leaves; showy, bright yellow four-petaled flowers; four-sided, club-shaped fruit pods.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry open woods, meadows, disturbed sites.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Course, fine, medium textured soils; high moisture usage; low drought tolerance.	Ecosystem Services:		Attracts birds, hummingbirds, and bees.	
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Moderate lifespan.	
Shade Tolerance:	Tolerant of shade.				

Oenothera perennis

Small Sundrops

Native To:	Regional	Wetland Indicator:	FAC-	Soil:	Not Available.
Form/Color	Perennial, stems to 2', unbranched, narrow leaves, flowers yellow in June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist or wet soil in undisturbed, open areas, meadows.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist to average sandy or gravelly soil.	Ecosystem Services:		Attractive to hummingbirds.	
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Opuntia humifusa

Prickly Pear Cactus

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.5-7.0
Form/Color	Grows to 1'; evergreen, prickly; showy, yellow flowers bloom in June-July; reddish, fleshy fruit ripe October-November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry sand, back dunes, cliff faces and rocky sites.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Drought tolerant; grows well on varied moisture conditions; well drained soil.	Ecosystem Services:		Used for protection and shelter by birds, snakes, and lizards. Flower very attractive to bees.	
Ornamental Value:	Yellow flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:		Also known as Devil's tongue	
Shade Tolerance:	Tolerant of partial shade.				

Osmorhiza claytonii

Hairy Sweet Cicely

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	Not Available.
Form/Color	Grows to 2'; white flowers bloom May-June; fruit ripe June-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Rich, moist mixed hardwood forests; urban parks.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Grows well on drained gravelly or sandy loams; poorly drained clay loams.				
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Osmorhiza longistylis

Longstyle Sweetroot

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	Not Available.
Form/Color	Compound umbrella-shaped with 3-6 rays; small white flowers, styles longer than petals, bloom May-June; blackish, bristly fruit ripe June-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist woods, floodplain forests.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Drought tolerant; prefers rich loamy soil.				
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increasing diversity and aesthetics in restoration of moist, mixed deciduous woodland understories.		
Shade Tolerance:	Tolerant of shade.				

Peltandra virginica

Green Arrow Arum

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-9.5
Form/Color	Grows to 30"; green-white flowers bloom June-July; fruit ripe August; slow grower.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Fresh to slightly brackish tidal and nontidal marshes and pond edges.	Urban Tolerance:		Tolerant of concrete debris.	
Hydrology:	Tolerant of flooding 100% of growing season.	Ecosystem Services:		Provides cover for invertebrates and small fish.	
Ornamental Value:	Green-white flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:		Used for erosion control, vegetation, diversity, and aesthetics for the margins of ponds and lakes; used for wetland mitigation.	
Shade Tolerance:	Tolerant of shade.				

Penstemon digitalis

White Beardtongue

Native To:	Regional	Wetland Indicator:	FAC	Soil:	pH 5.5-7.0
Form/Color	Moderate grower to 5', single stem, waxy-whitish or purplish, flowers white or pale purple in May-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Part shade, edges and meadows, second growth.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, low tolerance of soil compaction.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Attracts birds and butterflies.	
Ornamental Value:	White or pale purplish flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Penstemon hirsutus

Hairy Beardtongue

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.5-6.5
Form/Color	Grows to 32", single stem, flowers white and purplish in May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry sandy or rocky fields, open woods.	Ecosystem Services:			
Hydrology:	Tolerant of drought.				
Ornamental Value:	White and purplish flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Penthorum sedoides

Ditch Stonecrop

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-7.0
Form/Color	Grows to 2': whitish flowers bloom July-September; fruit ripe August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Marshes, wet edges in low, sparse vegetation; undisturbed, open areas.	Ecosystem Services:			
Hydrology:	Medium drought tolerance; medium moisture usage; fine textured soils.				
Ornamental Value:	Interesting white flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Used for shoreline stabilization and increased diversity and aesthetics in wetland restoration, pond edges.	
Shade Tolerance:	Moderately tolerant of shade.				

Phlox divaricata

Wild Blue Phlox

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 5.5-7.2
Form/Color	Rapid grower to 20", flowers pale blue-purple in May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist, rich, open woods, fields.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, low tolerance of soil compaction.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Attracts birds and butterflies.	
Ornamental Value:	Showy blue-purple flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Phlox subulata

Mountain Phlox

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.0-8.0
Form/Color	Ground cover, semi-evergreen, rapid grower to 8", flowers purple to pink in May-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Gravelly, sandy soil, rocky ledges.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, no tolerance of soil compaction.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:			
Ornamental Value:	Purple and pink showy flowers.	Compatibility:		Quickly overgrown by taller vegetation.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Pityopsis falcata

Atlantic Golden Aster

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Acidic soils.
Form/Color	8"-15"; single stem, yellow flowers bloom July-September; leaves and stem white-wooly;	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, sandy soil near the coast, pine barrens.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry, sandy, well-drained soil. Not flood tolerant.	Ecosystem Services:			
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used in restoration of coastal back dunes and grasslands. Has a restricted range, though common in region.	
Shade Tolerance:	Intolerant of shade.				

Plantago aristata

Largebracted Plantain

Native To:	New York City	Wetland Indicator:	NI	Soil:	Not Available.
Form/Color	Grows to 6"-12"; white, green, brown flowers bloom May-November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Roadsides, dry soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderate drought tolerance.	Ecosystem Services:		Eaten by large mammals and terrestrial birds.	
Ornamental Value:		Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Podophyllum peltatum

Mayapple

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH < 6.8
Form/Color	Grows to 20"; erect stems; large umbrella-shaped leaves; white flowers with yellow center blooms in May; yellow fruit ripe in July-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist, undisturbed woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium moisture; well-drained soil.	Ecosystem Services:		Fruit eaten by box turtles, birds, and small mammals.	
Ornamental Value:	White flowers.	Compatibility:		Frequently forms colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Sometimes affected by bright orange rust fungus.	
Shade Tolerance:	Tolerant of shade.				

Polygonatum biflorum

Smooth Solomon's Seal

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH < 6.8
Form/Color	Arching stem grows to 12"; bright yellow green foliage; pale green to white flowers bloom April-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, dry to moist woods; thickets; calcareous hammocks.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium moisture; moist, acid soils.	Ecosystem Services:		Roots eaten by mammals; fruit attracts butterflies and birds.	
Ornamental Value:	White flowers, fruit.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Polygonatum pubescens

Hairy Solomon's Seal

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 5.0-7.6
Form/Color	Single stem, to 15", has minute hairs on underside of leaves; green fruit; blooms April-June	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist soil; intolerant of drought.	Ecosystem Services:		Attracts birds and butterflies.	
Ornamental Value:	Flowers, fruit.	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Poisonous berries.	
Shade Tolerance:	Tolerant of shade.				

Polygonella articulata

Jointweed

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Grows to 4"-20" ; erect tall forb, thin stems; white to pink flowers bloom July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, sandy cliffs; acidic soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Drought tolerant.	Ecosystem Services:			
Ornamental Value:	White to pink flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Polygonum arifolium

Halberd-leaved Tearthumb

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Not Available.
Form/Color	Single stem with hooked prickles; arrow-shaped leaves; pink, white, or green flowers bloom August-September; shiny brown seeds.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open marshes and pond edges.	Ecosystem Services:	Seeds eaten by birds and small mammals.		
Hydrology:	Wet to moist soils.				
Ornamental Value:	Pink, white, green flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Polygonum hydropiperoides

Mild Water-pepper

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.8-8.8
Form/Color	Grows to 6'; reclining stems; tops of leaves fringed with long bristles; pink to white flowers bloom July-November; slow grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open, wet soil, pond edges; freshwater tidal and nontidal marshes.	Ecosystem Services:	Moderate wildlife value.		
Hydrology:	Intolerant of drought; medium moisture usage; fine and medium textured soils.				
Ornamental Value:	Pink to white flowers.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:	Used as a minor species for increasing diversity and aesthetics in marsh and swamp habitat restoration; wetland mitigation.		
Shade Tolerance:	Tolerant of partial shade.				

Polygonum sagittatum

Arrow-leaved Tearthumb

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-8.5
Form/Color	Grows to 6'; reclining stems; pink to green flowers bloom and fruits August-November; fast grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Freshwater tidal and nontidal marshes.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Course, fine, medium textured soils; low drought tolerance.	Ecosystem Services:		Low wildlife value as food for waterbirds.	
Ornamental Value:	Pink to green flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Secondary species erosion control on open soil of newly restored wetlands and wetland mitigation.	
Shade Tolerance:	Intolerant of shade.				

Polygonum virginianum

Jumpseed

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	6'; single stem, greenish white flowers bloom July-October; produces fruit August-November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Woods, floodplain forests, common in disturbed woodlands and urban forests.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderately drought tolerant.	Ecosystem Services:			
Ornamental Value:	Greenish white flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for erosion control and soil cover in degraded forest understory.	
Shade Tolerance:	Tolerant of partial shade.				

Pontederia cordata

Pickeralweed

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 6.0-8.0
Form/Color	3'; spike, showy blue flowers bloom July-September; moderate grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of alkaline fill and concrete debris.
Habitat:	Shallow water; tolerates brief tidal submersion; pond edges; freshwater to slightly brackish tidal marshes.	Ecosystem Services:	High wildlife value as cover for fish and invertebrates; cools water by providing shade.		
Hydrology:	Tolerant of flooding or saturated soil 100% of growing season.				
Ornamental Value:	Blue flowers.	Compatibility:	Can form colonies.		
Salt Tolerance:	Tolerant of salt.	Other:	Used for erosion control, diversity, aesthetics for restoration of pond and lake edges, marshes; wetland mitigation.		
Shade Tolerance:	Tolerant of partial shade.				

Potentilla arguta

Tall Cinquefoil

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 6.0-8.0
Form/Color	Grows to 3', flowers white in May-June, fruits in July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium soils, moderate tolerance of soil compaction.
Habitat:	Dry, rocky, open woods, fields.	Ecosystem Services:			
Hydrology:	Low tolerance to drought; deep mesic or alluvial soils; moist soil conditions.				
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Potentilla canadensis

Dwarf Cinquefoil

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	Grows to 1.5'; yellow flowers bloom April-June.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry to moist soils in woods and fields.	Ecosystem Services:	Minor food source for small and large mammals and terrestrial birds, host of grizzled skipper.		
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Potentilla simplex

Common Cinquefoil

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.5-7.0
Form/Color	Yellow flowers bloom April-June; produces fruit in July; prostrate stems.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry woods, fields, meadows; open areas, lawns, edges, low vegetation.	Ecosystem Services:	Attracts bees.		
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for erosion control plantings and soil cover in degraded, open woodlands, roadsides, and low meadows.		
Shade Tolerance:	Tolerant of partial shade.				

Prenanthes trifoliata

Gall-of-the-Earth

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-5.2
Form/Color	Grows to 7'; whitish flowers bloom August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist woods, gaps, edges, sandy soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry to moist, sandy soil conditions.	Ecosystem Services:			
Ornamental Value:	Whitish flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used to increase diversity and aesthetics in restoration of dry woodlands on sandy soils.	
Shade Tolerance:	Tolerant of partial shade.				

Pseudognaphalium obtusifolium

Rabbit-tobacco

Native To:	New York City	Wetland Indicator:	NI	Soil:	Acidic soils.
Form/Color	Single stem, whitish, yellow, round flowers bloom August-November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Pine woods and dry open areas.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry, well-drained soil.	Ecosystem Services:		Attracts butterflies and other insects.	
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Pycnanthemum incanum

Hoary Mountainmint

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH < 6.8
Form/Color	Grows to 2' - 3'; Dense flowerheads have small white-pink spotted flowers and a frosty white bloom that covers leaves and stems around and just below the heads, July - September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Thickets; pastures.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Tolerant of drought.				
Ornamental Value:	White flowers.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for erosion control.		
Shade Tolerance:	Tolerant of partial shade.				

Pycnanthemum tenuifolium

Narrow-leaved Mountain Mint

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH < 6.8
Form/Color	Grows to 30"; leafy, short axillary branches; white flowers with purple spots bloom June-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist to dry soil, fields, bogs.	Ecosystem Services:	Attracts birds and butterflies.		
Hydrology:	Dry to moist soil conditions; medium water usage.				
Ornamental Value:	White flowers.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Pycnanthemum virginianum

Mountain Mint

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.5-7.0
Form/Color	Grows to 1'to 3'; Flowers in numerous , roundish heads, leaves lance-shaped, stalkless and rounded at the base, July-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open areas, upland woods, fields.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist soil.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	White flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Pyrola americana

American Wintergreen

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	Perennial, evergreen, grows to 1', flowers white in June-August, shiny, leathery and almost round leaves.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist to dry undisturbed woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist, organic soil.	Ecosystem Services:			
Ornamental Value:	White bell shaped flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Ranunculus arborvitus

Small-flowered Crow-foot

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.0-7.5
Form/Color	Grows to 20"; small, yellow flowers bloom April-June; fruit ripe June-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet woods, shores; moist to wet herb layers of open forests, stream banks.	Ecosystem Services:			
Hydrology:	Moist to wet soil.				
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Minor species for restoring wet woodlands, open areas and increasing diversity.	
Shade Tolerance:	Tolerant of partial shade.				

Rudbeckia hirta

Black-eyed Susan

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Grows to 15-36"; yellow, orange ray flowers sometimes with a dark base, blooms June-October; rapid grower.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Performs well in the right of way.	
Habitat:	Open areas, roadsides.	Ecosystem Services:		Eaten by mammals and terrestrial birds.	
Hydrology:	Medium drought tolerance, fine and medium textured soils.				
Ornamental Value:	Yellow, orange flowers	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Used in wildflower mixes for restoration projects.	
Shade Tolerance:	Intolerant of shade.				

Rudbeckia laciniata

Cutleaf Coneflower

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 4.5-7.0
Form/Color	Perennial, grow to 1.5-10', hairless stems, waxy-pale plant, flowers yellow in July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse, medium, and fine soils, low tolerance of soil compaction.
Habitat:	Stream banks, moist places, rich low ground.	Ecosystem Services:			
Hydrology:	Tolerant of drought.				
Ornamental Value:	Yellow flowers in summer and fall.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Rudbeckia triloba v. triloba

Thin Leaved Coneflower

Native To:	Regional	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Short-lived perennial or biennial, grows to 1.5-5', flowers yellow to orange in June-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Moist open woods, thickets.	Ecosystem Services:			
Hydrology:	Tolerant of drought.				
Ornamental Value:	Showy yellow to orange flowers in summer and fall.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Rumex verticillatus

Swamp Dock

Native To: New York City **Wetland Indicator:** OBL **Soil:** Not Available.

Form/Color: Grows to 4'; perennial, ascending branches; green flowers; 3-winged flower fruit June-September. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Pond edges, swamps. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Intolerant of drought. **Ecosystem Services:**

Ornamental Value: **Compatibility:** Can form colonies.

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of partial shade.

Sagittaria latifolia

Broadleaf Arrowhead

Native To: New York City **Wetland Indicator:** OBL **Soil:** pH 4.7-8.9

Form/Color: Basal leaves; leaf blades are arrowhead-shaped; white three-petaled flowers bloom summer through fall. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Ditches, marshes, pools along stream and lake edges. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Intolerant of drought conditions; high moisture usage. **Ecosystem Services:** Attracts birds.

Ornamental Value: White flowers. **Compatibility:** Can form colonies.

Salt Tolerance: Intolerant of salt. **Other:**

Shade Tolerance: Intolerant of shade.

Salicornia depressa

Virginia Glasswort

Native To: New York City **Wetland Indicator:** OBL **Soil:** pH 6.6-8.5

Form/Color: Herbaceous perennial, emergent, erect, succulent stem, to 12", green turning red in the fall. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Salty marshes. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Medium moisture usage. **Ecosystem Services:**

Ornamental Value: **Compatibility:** Can form mats.

Salt Tolerance: Tolerant of salt. **Other:** Minor species for salt marsh restoration

Shade Tolerance: Intolerant of shade.

Salvia lyrata

Lyreleaf Sage

Native To: Regional **Wetland Indicator:** FACW **Soil:** pH 6.8-7.2

Form/Color: Perennial, dark green to purplish leaves, flowers light blue to violet in April-June. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Roadsides, fields, open woodlands. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Tolerant of medium drought; dry to moist soil conditions. **Ecosystem Services:** Attracts butterflies and hummingbirds.

Ornamental Value: Blue to violet flowers in clusters at the top of the stem. **Compatibility:** May become weedy.

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of partial shade.

Sanguinaria canadensis

Bloodroot

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.8-7.2
Form/Color	Grows to 15", white flowers with 8-12 petals and yellow stamens bloom March-April.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Interiors of undisturbed forests, moisted woods, sometimes floodplains or slopes of streams.	Ecosystem Services:	Attracts birds and butterflies.		
Hydrology:	Drought tolerant; medium moisture usage.				
Ornamental Value:	Showy white flowers, bloom time only a few days, scallop shaped leaves.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Sanicula canadensis

Canada Sanicle

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	75 cm; greenish yellow flowers bloom May-July; hooked, bristly fruit.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry open woods.	Ecosystem Services:			
Hydrology:	Moist soil conditions.				
Ornamental Value:	Greenish yellow flowers, often overlooked due to their small size.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Saururus cernuus

Lizard's Tail

Native To:	New York City	Wetland Indicator:	NI	Soil:	Not Available.
Form/Color	Grows to 4'; hairy, erect stem; spike of small whitish flowers bloom June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Still water, wet lowlands, stream and lake edges.	Ecosystem Services:		Attracts birds.	
Hydrology:	Moist to wet soil conditions.				
Ornamental Value:		Compatibility:		Can form colonies.	
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Silene caroliniana ssp. Pensylvanica

Wild Pink

Native To:	Regional	Wetland Indicator:	UPL	Soil:	pH 5.0
Form/Color	Perennial, grows to 6", grows in clumps, flowers dark pink in April-May.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Crevasses in exposed bedrock in undisturbed, dry, woods.	Ecosystem Services:			
Hydrology:	Tolerant of drought; medium moisture usage.				
Ornamental Value:	Showy dark pink flowers in spring.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Attracts early season pollinators.	
Shade Tolerance:	Tolerant of partial shade.				

Silene stellata

Widowsfrill

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH <6.8
Form/Color	Grows to 2'-3'; perennial, multi-stemmed, white flowers bloom July-August; fringed petals.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open woods.	Ecosystem Services:			
Hydrology:	Moist, rich soils.				
Ornamental Value:	Brilliant white flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for increased diversity and aesthetics in restoration of open woodlands.	
Shade Tolerance:	Tolerant of partial shade.				

Sisyrinchium angustifolium

Blue Eyed Grass

Native To:	New York City	Wetland Indicator:	FACW-	Soil:	pH 5.0-7.0
Form/Color	Perennial, grows to 6-20", flowers pale-blue in June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist, open soil, open woods, fields.	Ecosystem Services:		Browsed by large mammals and terrestrial birds.	
Hydrology:	Low tolerance of drought; medium moisture usage.				
Ornamental Value:	Radially symmetrical, pale-blue flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Solidago bicolor

Silverrod

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-6.0
Form/Color	1-5 stems to 3'; white flowers bloom August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, open, oak, woods on sterile, rocky soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry soil conditions.	Ecosystem Services:		Attracts bees.	
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for increased diversity and aesthetics in restoration of open, dry woodlands, butterfly gardens.	
Shade Tolerance:	Tolerant of partial shade.				

Solidago caesia

Blue Stemmed Goldenrod

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.0-7.0
Form/Color	3'; yellow flowers bloom August-October; moderate grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, open, deciduous woods; frequent in NYC understories.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Fine and medium textured soils; low drought tolerance.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	Showy, yellow flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Used for increased diversity and aesthetics in restoration of moist forest understories; used in butterfly gardens; short lifespan.	
Shade Tolerance:	Moderately tolerant of shade.				

Solidago canadensis

Canada Goldenrod

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.8-7.5
Form/Color	Perennial, multi-stemmed to 6'; yellow flowers bloom August-October; fast grower.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Open areas and old fields.	Urban Tolerance:			Tolerant of fill and concrete.
Hydrology:	Fine, coarse, and medium textured soils; medium drought tolerance.	Ecosystem Services:			Eaten by small and large mammals and terrestrial birds.
Ornamental Value:	Showy, yellow flowers.	Compatibility:			Can compete with Mugwort invasion in nutrient rich, open fill soils, considered aggressive.
Salt Tolerance:	Intolerant of salt.	Other:			Used for erosion control on open slope, degraded open areas, meadows with concrete, roadsides.
Shade Tolerance:	Intolerant of shade.				

Solidago juncea

Early Goldenrod

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0-6.0
Form/Color	Perennial, frequently multistemmed to 4'; showy, yellow flowers bloom July-August.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Dry fields and roadsides.	Urban Tolerance:			Tolerant of concrete and fill soil.
Hydrology:	Dry to moist, sandy soils.	Ecosystem Services:			Attracts birds and butterflies.
Ornamental Value:	Showy, yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			Used for increased diversity and aesthetics in vegetation of open slopes, degraded open areas, roadsides, meadows with concrete.
Shade Tolerance:	Intolerant of shade.				

Solidago nemoralis

Gray Goldenrod

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.5-7.5
Form/Color	Perennial, frequently multistemmed to 3'; showy, yellow flowers bloom August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, dry, sandy soil, old fields, thin woods, edges.	Urban Tolerance:		Tolerant of fill soils.	
Hydrology:	Coarse and medium textured soils; medium drought tolerance.	Ecosystem Services:		Eaten by small and large mammals and terrestrial birds.	
Ornamental Value:	Showy, yellow flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Used for restoration of coastal grasslands and meadows on dry, sandy, sterile soils.	
Shade Tolerance:	Moderately tolerant of shade.				

Solidago odora

Sweet Goldenrod

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH < 6.8
Form/Color	Perennial, frequently multistemmed to 5'; showy, yellow flowers bloom July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, sandy soil in open woods, fields, edges.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Dry and sandy soil.	Ecosystem Services:		Eaten by small and large mammals and terrestrial birds; attracts honey bees.	
Ornamental Value:	Showy, yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for increased diversity and aesthetics in restoration of thin meadows, open woodlands on dry, sandy, sterile soils.	
Shade Tolerance:	Tolerant of partial shade.				

Solidago rugosa

Wrinkleleaf Goldenrod

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 5.0-7.0
Form/Color	Perennial, frequently multistemmed to 4'; showy, yellow flowers bloom August-November; fast grower.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Moist to dry open areas.	Urban Tolerance:		Urban Tolerance:	Tolerant of fill soils and concrete, Performs well in the right of way.
Hydrology:	Medium moisture usage; wet, well-drained soil conditions.	Ecosystem Services:		Ecosystem Services:	Attracts birds.
Ornamental Value:	Showy, yellow flowers.	Compatibility:		Compatibility:	Can form colonies.
Salt Tolerance:	Intolerant of salt.	Other:		Other:	Prevents invasion from mugwort in nutrient rich, moist fill soils.
Shade Tolerance:	Moderately tolerant of shade.				

Solidago sempervirens

Seaside Goldenrod

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.5-7.5
Form/Color	Perennial, frequently multistemmed to 5'; thick leathery leaves, showy yellow flowers bloom September-November; produces fruit September-November.	Stormwater Tolerance:		Stormwater Tolerance:	Insufficient information to determine tolerance.
Habitat:	Low dunes, brackish wet areas, salt marsh edges.	Urban Tolerance:		Urban Tolerance:	Insufficient information to determine tolerance.
Hydrology:	Coarse and medium textured soils; medium drought tolerance.	Ecosystem Services:		Ecosystem Services:	Attracts butterflies, bees, and small mammals.
Ornamental Value:	Showy, yellow flowers.	Compatibility:		Compatibility:	
Salt Tolerance:	Very tolerant of salt.	Other:		Other:	Used for increasing diversity when restoring high salt marsh habitats, back dune swales, and low fore-dunes.
Shade Tolerance:	Intolerant of shade.				

Solidago speciosa

Showy Goldenrod

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 6.0-7.0
Form/Color	Perennial, frequently multistemmed to 5'; showy, yellow flowers bloom August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Meadows, woodland edges, dry, rocky fields.	Urban Tolerance:		Tolerates poor, dry soil.	
Hydrology:	Dry to medium soil conditions.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	Showy, yellow flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for increased diversity and aesthetics in vegetation of open slopes, meadows, roadside.	
Shade Tolerance:	Tolerant of partial shade.				

Symphotrichum cordifolium

Common Blue Wood Aster

Native To:	New York City	Wetland Indicator:	NI	Soil:	pH 5.7- 7.5
Form/Color	Grows to 5'; purple flowers bloom in summer; moderate grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open woods, clearings.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Coarse and fine textured soils; medium drought tolerance; low moisture usage.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	Purple flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Short lifespan.	
Shade Tolerance:	Intolerant of shade.				

Symphotrichum ericoides

White Heath Aster

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Acidic soils.
Form/Color	Grows to 3'; white flowers bloom August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry, open areas; sandy soil in New York City coastal habitats and successional scrub.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Moist to dry soil.				
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for vegetation in restoration of open areas, meadows, warm season grasslands, coastal black dune habitats. Used in butterfly		
Shade Tolerance:	Intolerant of shade.				

Symphotrichum laeve

Smooth Blue Aster

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.8-7.8
Form/Color	Grows to 3'; waxy dark green leaves; showy blue flowers bloom August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Dry, open woods, sandy soil.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Moist to dry soil.				
Ornamental Value:	Showy, blue flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:	Used for open, sandy soil, in restoration of meadows, warm season grasslands, coastal back-dune successional habitats. Used in		
Shade Tolerance:	Tolerant of partial shade.				

Symphyotrichum novae-angliae

New England Aster

Native To:	New York City	Wetland Indicator:	FACW-	Soil:	pH < 6.8
Form/Color	Grows to 6': showy, blue-purple flowers bloom August-October; produces fruit October-November; slow grower.	Stormwater Tolerance:			Tolerant of stormwater.
Habitat:	Moist meadows, swamps, pond edges.	Urban Tolerance:			Performs well in the right of way.
Hydrology:	Tolerant of flooding 25% of growing season; tolerant of moderate drought.	Ecosystem Services:			Attracts butterflies.
Ornamental Value:	Showy, blue-purple flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Used for open wetland restoration and mitigation; used in butterfly gardens.
Shade Tolerance:	Intolerant of shade.				

Symphyotrichum novi-belgii

New York Aster

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.5-7.0
Form/Color	Grows to 4': showy, blue flowers bloom August-October.	Stormwater Tolerance:			Insufficient information to determine tolerance.
Habitat:	Moist to wet open areas.	Urban Tolerance:			Insufficient information to determine tolerance.
Hydrology:	Medium moisture conditions.	Ecosystem Services:			Attracts butterflies.
Ornamental Value:	Showy, blue flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			Used for increased diversity and aesthetics in restoration of moist to dry open areas, meadows, warm-season grasslands.
Shade Tolerance:	Intolerant of shade.				

Symphotrichum pilosum

Hairy White Oldfield Aster

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.4-7.0
Form/Color	Prennial, frequently multistemmed, 5': white flowers bloom August-November.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist open habitats, slopes, meadows, butterfly gardens.	Urban Tolerance:		Tolerant of concrete debris and other urban conditions.	
Hydrology:	Moist to dry, sandy soil.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Symplocarpus foetidus

Skunk Cabbage

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-6.2
Form/Color	Grows to 2'; purple green floral bract February-March; blackish, green, fleshy fruit August-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamp forests, freshwater tidal and nontidal marshes, shady steeps, stream banks.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Tolerant of saturated soil 100% of growing season.	Ecosystem Services:		Low wildlife value.	
Ornamental Value:	Purple flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Used for increasing diversity and aesthetics in restoration of swamp forests herb layer; wetland mitigation.	
Shade Tolerance:	Tolerant of partial shade.				

Tephrosia virginiana

Goat's Eve

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Alternate compound leaves to 28"; pale yellow and pink flowers bloom June-July; produces fruit August- October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Sandy or rocky soil of of back-dune grasslands, open pine or oak barrens.	Ecosystem Services:	Eaten by small and large mammals and terrestrial birds.		
Hydrology:	Dry, sandy soil conditions.				
Ornamental Value:	Pale yellow and pink flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Parts of plant considered toxic. Used for increased diversity and aesthetics in restoration or open woodlands or barrens on dry sandy soil.		
Shade Tolerance:	Tolerant of partial shade.				

Thalictrum dioicum

Early Meadow Rue

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.0-8.0
Form/Color	Grows to 1-2'; herbacious perennial; showy, white flowers bloom April-May.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Open, moist meadows, edges, rocky, open woods.	Ecosystem Services:			
Hydrology:	Fine and medium textured soils; medium drought tolerance.				
Ornamental Value:	Showy, white flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Short lifespan. Male and female flowers are on separate plants.		
Shade Tolerance:	Moderately tolerant of shade.				

Thalictrum pubescens

King of the Meadow

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.0-8.0
Form/Color	Grows to 9'; stalkless stem leaves; pale green flowers bloom June-August; small rounded head of achenes.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet woods, meadows, marshes, stream banks.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Wet or moist soil; well-drained soil.	Ecosystem Services:		Attracts butterflies and bees.	
Ornamental Value:	Pale green flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:		Short lifespan.	
Shade Tolerance:	Tolerant of partial shade.				

Tiarella cordifolia

Heartleaf Foamflower

Native To:	Regional	Wetland Indicator:	FAC	Soil:	pH 5.0-7.0
Form/Color	Grows to 1', flowers white in May, fruits in July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, moist woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium moisture usage.	Ecosystem Services:		Attracts small bees, flies and butterflies.	
Ornamental Value:	Showy white flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Spreads well by rhizomes.	
Shade Tolerance:	Tolerant of shade.				

Tradescantia virginiana

Spiderwort

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.0-8.0
Form/Color	Grows to 18"; 3-petaled blue flowers on erect stem bloom in small clusters May-June.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of fill soils.
Habitat:	Open woods, edges, fill.	Ecosystem Services:	Attracts butterflies and bees.		
Hydrology:	Fine and medium textured soils.				
Ornamental Value:	Blue flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Short lifespan, fast grower.		
Shade Tolerance:	Moderately tolerant of shade.				

Triadenum virginicum

Virginia Marsh St. Johnswort

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Acidic soils.
Form/Color	Grows to 2'; pinkish, 5-petaled pinkish flowers.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Wet, open areas, pond edges, clean, undisturbed marshes.	Ecosystem Services:			
Hydrology:	Tolerates some flooding.				
Ornamental Value:	Pink flowers.	Compatibility:	Can form colonies.		
Salt Tolerance:	Low tolerance of salt.	Other:	Used for increased diversity and aesthetics, erosion control, in wetland restoration and mitigations.		
Shade Tolerance:	Intolerant of shade.				

Trichostema dichotomum

Forked Bluecurls

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Grows to 6-24"; blue irregularly 5-lobed flowers bloom August-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Open, dry, soil, old fields, open woods, open dry, disturbed soil.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Dry, sandy soil conditions.	Ecosystem Services:	Valuable to native bees.		
Ornamental Value:	Blue flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increased diversity and aesthetics in restoration of dry grasslands or coastal meadows.		
Shade Tolerance:	Tolerant of partial shade.				

Typha angustifolia

Narrowleaf Cattail

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 3.5-8.7
Form/Color	Tall grasslike form, wide leaves, to 10'; brown flowers bloom May-June; produces fruit July-August; fast grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Swamps, pond margins, freshwater and brackish tidal marshes, open saturated soil.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Coarse, fine, and medium textured soils; low drought tolerance.	Ecosystem Services:	Moderate wildlife value; rhizomes eaten by muskrats; red-wing blackbirds use for nesting.		
Ornamental Value:	Brown flowers and seed heads.	Compatibility:	Frequently forms colonies.		
Salt Tolerance:	Moderately tolerant of salt.	Other:	Sometimes used in restorations and mitigations; used for controlling erosion in wetland soils in brackish or alkaline soils; long lifespan.		
Shade Tolerance:	Intolerant of shade.				

Typha latifolia

Broadleaf Cattail

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.5-8.7
Form/Color	Tall grasslike form, broad leaves, to 10'; male yellowish flowers, dark brown female flowers bloom May-July; fast grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Clean water, marshes, roadside ditches.	Ecosystem Services:	Seeds eaten by waterfowl; rhizomes eaten by muskrats.		
Hydrology:	Coarse, fine, and medium textured soils; intolerant of drought; high moisture usage.				
Ornamental Value:	Yellowish flowers.	Compatibility:	Frequently forms colonies.		
Salt Tolerance:	Intolerant of salt.	Other:	Used for erosion control, bank stabilization, in freshwater wetlands, restorations of pond margins, marshes, and wetland mitigations.		
Shade Tolerance:	Intolerant of shade.				

Uvularia sessilifolia

Sessileleaf Bellwort

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.8-5.6
Form/Color	Grows to 4-12"; pale yellow flowers with 6 petals, dangle from under the stem, bloom April-mid-July; 3-sided fruit produced in summer.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Undisturbed moist forest interiors.	Ecosystem Services:			
Hydrology:	Prefers moist conditions.				
Ornamental Value:	Pale yellow flowers, attractive fruit.	Compatibility:	Can form colonies.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Used for increased diversity and aesthetics in restoration of moist forest understories.		
Shade Tolerance:	Tolerant of shade.				

Verbena hastata

Swamp Verbena

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Not Available.
Form/Color	Grows to 4', perennial; blue tubular flowers bloom July-September.	Stormwater Tolerance:			Tolerant of stormwater.
		Urban Tolerance:			Performs well in the right of way.
Habitat:	Open areas, part shade, marshes, pond edges.	Ecosystem Services:			Seeds eaten by birds; plants eaten by rabbits.
Hydrology:	Prefers moist conditions.				
Ornamental Value:	Blue flowers.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Verbena urticifolia

White Vervain

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Grows to 4'; erect hairy single stem; small tubular white flowers bloom June-August; small dry fruit.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Insufficient information to determine tolerance.
Habitat:	Wetland edges; partially shaded open edges in good soil.	Ecosystem Services:			Seeds eaten by songbirds; plant eaten by rabbits.
Hydrology:	Moist, well-drained soils.				
Ornamental Value:	White flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Vernonia noveboracensis

New York Ironweed

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.5-8.0
Form/Color	Grows to 3-6'; purple flowers August-October; dry achene with dark brownish plume fruit; moderate grower.	Stormwater Tolerance:			Tolerant of stormwater.
		Urban Tolerance:			Performs well in the right of way.
Habitat:	Open marshes, wet edges.	Ecosystem Services:			Attracts butterflies and insects.
Hydrology:	Moderate drought tolerance; medium moisture usage.				
Ornamental Value:	Purple flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			Short lifespan.
Shade Tolerance:	Moderately tolerant of shade.				

Veronicastrum virginicum

Culver's Root

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH < 6.8
Form/Color	Perennial, grows to 6', whorled leaves, flowers white in June-August.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Insufficient information to determine tolerance.
Habitat:	Rich, moist to dry woods, gaps, dry meadows.	Ecosystem Services:			Host to several bee species, moths, flies, wasps, and butterflies.
Hydrology:	Medium to wet moisture usage. Moderate drought tolerance.				
Ornamental Value:	Showy, white, bottle-brush shaped flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of light shade.				

Viola cucullata

Blue Marsh Violet

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	Not Available.
Form/Color	To 8". Pale violet flowers with dark blue-veined center bloom April-July; egg-shaped fruit, dry capsule with black seeds April-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamps, bogs.	Ecosystem Services:		Attracts birds.	
Hydrology:	Moist, well-drained soils.				
Ornamental Value:	Pale violet flowers.	Compatibility:		Can form colonies.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Viola labradorica

Labrador Violet

Native To:	Regional	Wetland Indicator:	FAC	Soil:	pH 5.0-6.5
Form/Color	Evergreen, perennial; grows 1-3"; violet to lavender flowers bloom in May.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Woods and grassy places.	Ecosystem Services:		Attracts butterflies and birds.	
Hydrology:	Well-drained soil; moist soil conditions.				
Ornamental Value:	Lavendar, purple flowers.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Viola pubescens

Yellow Forest Violet

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 6.0-7.0
Form/Color	Grows to 18"; showy, yellow flowers bloom April-May; produces fruit July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Rich woods and floodplain forests.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Medium textured soils; medium drought tolerance.				
Ornamental Value:	Showy, yellow flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Used for increased diversity and aesthetics in restoration of forest understories; short lifespan.		
Shade Tolerance:	Tolerant of shade.				

Viola sororia

Common Violet

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	pH 6.0-7.8
Form/Color	Grows to 6"; showy, violet flowers bloom April-May; produces fruit June-July.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of disturbance. Tolerates calcium deicers.
Habitat:	Open woods, shady lawns.	Ecosystem Services:	Attracts butterflies.		
Hydrology:	Low drought tolerance; high moisture usage; fine and medium textured soils.				
Ornamental Value:	Violet flowers.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Used for shady edges.		
Shade Tolerance:	Tolerant of shade.				

Viola x primulifolia

Primrose-leaved Violet

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	Acidic soils.
Form/Color	Grows to 6"; white flowers marked with purple bloom April-June; fruit produces August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist, open meadows; open swamp forests, sandy soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Sandy soil.	Ecosystem Services:		Attracts butterflies.	
Ornamental Value:	White flowers with purple.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Used for increased diversity and aesthetics in restoration of wooded wetlands in appropriate habitats.	
Shade Tolerance:	Tolerant of partial shade.				

Waldsteinia fragarioides

Barren Strawberry

Native To:	Regional	Wetland Indicator:	NI	Soil:	Slightly acidic soils.
Form/Color	Herbaceous perennial, five-petaled, yellow flowers bloom April to May; grows to 6".	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wooded slopes.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Medium moisture usage; drought tolerant.	Ecosystem Services:			
Ornamental Value:	Yellow flowers.	Compatibility:			
Salt Tolerance:	Very tolerant of salt.	Other:		Fruit is inedible; good plant for low maintenance sites.	
Shade Tolerance:	Tolerant of shade.				

Zizia aurea

Golden Alexanders

Native To:	Regional	Wetland Indicator:	FAC	Soil:	pH 5.5-7.0
Form/Color	Grows to 32", shiny compound leaves with 3-5 leaflets, flowers yellow in April-June, fruits in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Rich, moist meadows, wet, open woods, rich soil.	Ecosystem Services:	Host to some butterfly species.		
Hydrology:	Moist soils, not drought tolerant.				
Ornamental Value:	Showy yellow flowers in spring and summer.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Ferns:

Ferns add texture to the ground plane and there are species adapted to sun or shade, wet or dry conditions, and various heights and degrees of vigor.

Adiantum pedatum

Maidenhair Fern

Native To:	Regional	Wetland Indicator:	FAC-	Soil:	pH 4.6-6.6
Form/Color	Slow grower to 3', erect stipe that forks in two, leaf blades lax and arching, spores in July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Rich, moist woods, stream banks.	Urban Tolerance:	Adapted to coarse and medium soils, low tolerance of soil compaction.		
Hydrology:	Tolerant of mild drought.	Ecosystem Services:	Fronds occasionally eaten by rabbits, secondary species for increased diversity.		
Ornamental Value:	Fine fronds, semi-erect shape.	Compatibility:	Slow seed spread rate, low seedling vigor, moderate vegetative spread rate.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Asplenium platyneuron

Ebony Spleenwort

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-7.0
Form/Color	Semievergreen perennial, grows to 1.5', spores June-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Moist, open, rocky woods, rich, circumneutral soil.	Urban Tolerance:	Will colonize masonry in urban sites, found in disturbed sites.		
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:	Minor species for increased diversity.		
Ornamental Value:	Fronds have herringbone shape and are light and dark green.	Compatibility:	Does not compete well with aggressive plants.		
Salt Tolerance:	Intolerant of salt.	Other:	Exploitably vulnerable in New York state.		
Shade Tolerance:	Tolerant of partial shade.				

Athyrium filix-femina

Lady Fern

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 3.9-7.0
Form/Color	Perennial, fine-textured, upright-growing fern, moderate grower to 2-3', spores June-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Somewhat tolerant of urban pollution.	
Habitat:	Moist woods, shady edges.	Ecosystem Services:		Leaves eaten by rabbits and deer, secondary species for increased diversity.	
Hydrology:	Tolerant of drought.				
Ornamental Value:	Fine-textured fronds, upright growing.	Compatibility:		Moderate rate of vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Dennstaedtia punctilobula

Hay-Scented Fern

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.0-5.0
Form/Color	Perennial, groundcover, single, very fine fronds in large colonies, 1-3.5', spreads primarily by rhizomes, spores June-August.	Stormwater Tolerance:		Tolerant of stormwater.	
		Urban Tolerance:		Somewhat tolerant of urban pollution, performs well in the right of way.	
Habitat:	Open woods, gaps, edges.	Ecosystem Services:		Habitat for birds and bees.	
Hydrology:	Tolerant of drought when well established.				
Ornamental Value:	Single, very fine fronds, that will colonize.	Compatibility:		May crowd out less aggressive plants. Can form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:		Often colonizes old burn sites.	
Shade Tolerance:	Tolerant of open shade.				

Deparia acrostichoides

Silver False Spleenwort

Native To: New York City **Wetland Indicator:** FAC **Soil:** pH 6.1-7.5

Form/Color: Perennial, fronds to 4' long, long-tapering fronds, forms in asymmetric clumps. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Damp woods, slopes. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Needs consistently moist soil. **Ecosystem Services:**

Ornamental Value: Silvery fronds. **Compatibility:**

Salt Tolerance: Insufficient information to determine tolerance. **Other:** Exploitably vulnerable in New York state, parts of plant poisonous if ingested.

Shade Tolerance: Tolerant of partial shade.

Dryopteris carthusiana

Spinulose Woodfern

Native To: New York City **Wetland Indicator:** FAC+ **Soil:** pH 5.0-6.0

Form/Color: Evergreen, delicate, lacy-cut, lance-shaped fronds, grow in colonies, 1-2.5', spores May-August. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Rich, moist to wet woods, circumneutral soil. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Needs consistently moist soil. **Ecosystem Services:** Secondary or minor species for increased diversity.

Ornamental Value: Delicate, lacy-cut, lance-shaped fronds. **Compatibility:**

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of shade.

Dryopteris cristata

Crested Woodfern

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 3.5-6.5
Form/Color	Evergreen, blue-green narrow lance-shaped fronds, 1.5-2.5', spores July-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet woods, swamp forests, bogs in acid soil.	Urban Tolerance:		Adapted to medium and fine soils, high tolerance of soil compaction.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Secondary or minor species for increased diversity.	
Ornamental Value:	Blue-green narrow lance-shaped fronds.	Compatibility:		Slow seed spread rate, moderate vegetative spread rate.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Dryopteris marginalis

Marginal Woodfern

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH up to 7.5
Form/Color	Evergreen, fine, clustered fronds, vase-like, 1.5-2', spores June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Woods, shaded, rocky slopes.	Urban Tolerance:		Somewhat tolerant of urban pollution.	
Hydrology:	Tolerant of drought, prefers moist soil.	Ecosystem Services:		Secondary species for increased diversity, provides habitat and shelter for birds and bees.	
Ornamental Value:	Fine, clustered fronds.	Compatibility:			
Salt Tolerance:	Low tolerance of salt.	Other:		Exploitably vulnerable in New York state.	
Shade Tolerance:	Tolerant of shade.				

Onoclea sensibilis

Sensitive Fern

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.5-7.5
Form/Color	Perennial, sturdy, coarse, with broad triangular fronds, grows moderately to 1-2', spores mature in October.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Open swamp forests, freshwater tidal and nontidal marshes, undisturbed ditches.	Urban Tolerance:		Somewhat tolerant of urban pollution, performs well in the right of way.	
Hydrology:	Tolerant of flooding. Intolerant of drought.	Ecosystem Services:		Wildlife value low, but eaten by some insects.	
Ornamental Value:	Broad triangular fronds with persistent fertile frond throughout.	Compatibility:		Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:		Eaten by some insects, toxic to horses, tolerant of disturbed sites with wet soil. Used for swamp forest restoration.	
Shade Tolerance:	Tolerant of shade.				

Osmunda cinnamomea

Cinnamon Fern

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.5-7.0
Form/Color	Perennial, large, pinnate fronds growing in circular clusters, to 2.5-3', spores mature May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamp forests, shady stream banks, moist to wet forest soil.	Urban Tolerance:		Adapted to medium and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Tolerant of flooding and drought.	Ecosystem Services:		Eaten by rabbits, but overall wildlife value low.	
Ornamental Value:	Large, pinnate fronds in circular clusters. Cinnamon colored fronds.	Compatibility:		Moderate seed spread rate.	
Salt Tolerance:	Low tolerance of salt.	Other:		Slow grower. Used for restoration of swamp forest habitats, woodland pond edges.	
Shade Tolerance:	Tolerant of shade. Prefers partial shade.				

Osmunda claytoniana

Interrupted Fern

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.0-6.0
Form/Color	Perennial, large, coarse, pinnate fronds, 2-4', spores May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist to somewhat dry open woods, rocky or sandy acid soils.	Urban Tolerance:		Adapted to medium and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Low tolerance to drought, prefers moist soil.	Ecosystem Services:		Used infrequently by wildlife.	
Ornamental Value:	Large pinnate fronds. Fertile pinnae interrupting the fronds.	Compatibility:		Slow seed spread rate, rapid vegetative spread rate.	
Salt Tolerance:		Other:		Intolerant of salt.	
Shade Tolerance:	Tolerant of partial shade.				

Osmunda regalis

Royal Fern

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-7.0
Form/Color	Perennial, fine, bipinnate fronds, to 2-6', spores May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Stream banks, freshwater tidal marshes, swamp forests, vernal pond margins, shallow water to wet soil, prefers acid soil.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Tolerant of flooding and drought.	Ecosystem Services:			
Ornamental Value:	Fine fronds. Delicate soft green fertile fronds.	Compatibility:		Rapid vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:		Slow grower. Used for restoration of swamp forest habitats, woodland pond edges, stream banks.	
Shade Tolerance:	Tolerant of light shade.				

Polypodium virginianum

Rock Cap Fern

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH < 6.8
Form/Color	Evergreen, grows to 1' or less, spores June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerant of soil compaction.	
Habitat:	Moist to dry shade, in thin, circumneutral soils on glacial erratics in rocky woods, sometimes on banks, tree bases, old logs, limestone cliffs.	Ecosystem Services:			
Hydrology:	Tolerant of drought and moist, well-drained soil.				
Ornamental Value:	Persistent leathery fronds that will colonize on rocky areas.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Exploitably vulnerable in New York state. Secondary species for increased diversity.	
Shade Tolerance:	Tolerant of shade.				

Polystichum acrostichoides

Christmas Fern

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.0-7.0
Form/Color	Evergreen groundcover, fronds clustered, tall, bushy, 1-3', spores May-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Somewhat tolerant of urban pollution.	
Habitat:	Rich soil of wooded slopes with minimal deep leaf litter, rocky slopes.	Ecosystem Services:			
Hydrology:	Tolerant of drought, prefers well-drained soil.				
Ornamental Value:	Clustered persistent fronds that thrive on slopes.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Minor species for increased diversity.	
Shade Tolerance:	Tolerant of shade.				

Pteridium aquilinum

Bracken Fern

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-7.0
Form/Color	Perennial, coarse fern to approximately 4', produces new fronds all season, blade is broadly triangular and divided into 3 nearly equal parts with leathery or papery texture.	Stormwater Tolerance:		Intolerant of stormwater.	
Habitat:	Dry, sterile soils, open, shrubby successional habitats or open woodlands in sterile, sandy soils.	Urban Tolerance:		Adapted to coarse and medium soils, no tolerance of soil compaction.	
Hydrology:	Moderate tolerance to drought.	Ecosystem Services:		Eaten by insect larvae, especially moths.	
Ornamental Value:	Large, triangular shaped leaves.	Compatibility:		Can be aggressive, particularly in burned-over sites, allelopathic.	
Salt Tolerance:	Intolerant of salt.	Other:		Somewhat weedy, infected by fungi, leaf spot, root/stem rot, no edible parts, toxic to animals.	
Shade Tolerance:	Tolerant of partial shade.				

Thelypteris noveboracensis

New York Fern

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.9-7.0
Form/Color	Perennial, very fine, pinnate fronds, 1-2', spores June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, moist to wet woodlands.	Urban Tolerance:		Somewhat tolerant of urban pollution.	
Hydrology:	Tolerant of drought.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	Very fine, pinnate fronds.	Compatibility:		Aggressively colonial with rapid colonization rate.	
Salt Tolerance:	Intolerant of salt.	Other:		Used for erosion control.	
Shade Tolerance:	Tolerant of partial shade.				

Thelypteris palustris

Marsh Fern

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.0-7.0
Form/Color	Perennial, slender fronds, moderate grower to 18", spore production June-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
		Urban Tolerance:	Somewhat tolerant of urban pollution.		
Habitat:	Freshwater tidal and nontidal marshes, wet meadows, rich muddy, subacid soil, stream banks	Ecosystem Services:	Wildlife value low, good cover for smaller insects.		
Hydrology:	Does not prefer standing water, but grows well by water.				
Ornamental Value:	Lance-oblong fronds, slightly narrower at base, turns harvest gold in the fall.	Compatibility:	Can form colonies.		
Salt Tolerance:	Moderately tolerant of salt.	Other:	Exploitably vulnerable in New York		
Shade Tolerance:	Moderately tolerant of shade.				

Woodwardia areolata

Netted Chain Fern

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.6-6.5
Form/Color	Perennial, lobed fronds, slow grower to 2', spore production July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
		Urban Tolerance:	Somewhat tolerant of urban pollution.		
Habitat:	Swamp forests, in acid soil, acid bogs, shrub swamps.	Ecosystem Services:	Wildlife value low.		
Hydrology:	Requires consistently moist soil.				
Ornamental Value:	Leaves begin pink and mature to forest-green.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:	Transplants well. Exploitably vulnerable in New York state.		
Shade Tolerance:	Tolerant of shade.				

Graminoids:

Graminoids provide abundant food sources to bird, animal, and insect species and can provide textural interest to ornamental planting. Different species are adapted to a wide variety of light, soil, and hydrologic conditions.

Agrostis perennans

Autumn Bent-Grass

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 5.5-7.5
Form/Color	Perennial, grows to 3' tall, tufted with autumn basal shoots, inflorescence flowers and fruits August-September.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			High tolerance of soil compaction
Habitat:	Disturbed woods, open areas, lawns, trail edges.	Ecosystem Services:			Slightly palatable for browse animals, moderately palatable for graze animals.
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Pale green to bronze-tinged inflorescence. Fine-textured form.	Compatibility:			Not a known allelopath, moderate grower, moderate rate of vegetative spread.
Salt Tolerance:	Intolerant of salt.	Other:			Susceptible to infection by some endophytic fungi.
Shade Tolerance:	Tolerant of partial shade.				

Ammophila breviligulata

Beach Grass

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.5-7.9
Form/Color	Rapid grower to 3', blooms and fruits in July-September. Thick wiry-green basal foliage with upright yellow flowering stalks.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Adapted to coarse and medium textured soils, low tolerance of soil compaction.
Habitat:	Beach foredunes, needs a moving substrate.	Ecosystem Services:			Moderately palatable by browse animals.
Hydrology:	Moderately tolerant of drought.				
Ornamental Value:		Compatibility:			Not a known allelopath, rapid grower, moderate rate of vegetative spread.
Salt Tolerance:	Tolerant of salt.	Other:			Used extensively in dune stabilization.
Shade Tolerance:	Intolerant of shade.				

Andropogon gerardii

Big Bluestem

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 6.5-7.5
Form/Color	Perennial, 3-9' tall, tufted, stems waxy blue-green and purple in bloom, densely flowered purple in July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.
Habitat:	Open areas.	Ecosystem Services:	Host to some butterflies.		
Hydrology:	Tolerant of drought.				
Ornamental Value:	Blue-green stem, with a turkey foot shaped inflorescence. Purple-white flowers.	Compatibility:	Not a known allelopath, slow rate of vegetative spread. May become weedy.		
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Andropogon virginicus

Broom-Sedge

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.9-7.0
Form/Color	Perennial, 20-60" tall, in clumps, pale, waxy green in bloom, pale yellow-tan in winter, awned, blooms and fruits in August-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium and fine soils, no tolerance of soil compaction.
Habitat:	Sandy, gravelly soil, open areas, uplands to seasonally dry wetland edges.	Ecosystem Services:	Wildlife value moderate, host to some butterflies.		
Hydrology:	Tolerant of drought, intolerant of flooding.				
Ornamental Value:	Green and straw yellow stalk with white fluffy seeds along the stalk.	Compatibility:	Allelopathic to competitors.		
Salt Tolerance:	Intolerant of salt.	Other:	Early pioneer on poor soil, often infected by endophytic fungi.		
Shade Tolerance:	Intolerant of shade.				

Aristida dichotoma

Churchmouse Three-Awn

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Annual, 8-16" tall, tufted, pale green to reddish, spikelets, blooms and fruits in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, sterile soil, fill.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderately drought tolerant.	Ecosystem Services:			
Ornamental Value:	Gray-green to reddish stalks turning a straw-like color.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Aristida oligantha

Prairie Three-Awn

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	Annual, 8-16" tall, pale green, spikelets, blooms and fruits in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, open areas, sandy soil.	Urban Tolerance:		Tolerant of gravel, sand, and clay.	
Hydrology:	Tolerant of drought, intolerant of flooding.	Ecosystem Services:		Seeds eaten by some rodents and songbirds, attracts butterflies.	
Ornamental Value:	Pale green stalks, turning a straw-like color.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Aristida purpurascens

Arrowfeather

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic to alkaline soils.
Form/Color	Perennial, 1-3' tall, tufted, spikelets, purplish, blooms and fruits in August-October.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Should tolerate concrete debris.
Habitat:	Dry, sparsely vegetated soils, prairies, glades.	Ecosystem Services:			
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Purplish plants.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			May be mechanically injurious to livestock.
Shade Tolerance:	Intolerant of shade.				

Aristida tuberculosa

Three-Awn

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Annual, 32" tall, spikelets, inflorescence open, blooms and fruits in August-October.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Insufficient information to determine tolerance.
Habitat:	Dry, sterile, soil in open areas, sandy fill, dunes.	Ecosystem Services:			Seeds eaten by few birds and small mammals, plants eaten by rabbits.
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Distinctive open inflorescence with long twisted awns.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Bolboschoenus robustus

Saltmarsh Bulrush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 6.4-8.4
Form/Color	Rhizomatous; blooms and produces fruit July-October; alternating green leaves; dry, papery flowers covered by brown, finely hairy scale on 1" long cylindrical spikes.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	High salt marsh; near brackish water; fine and medium textured soil.	Urban Tolerance:		Tolerant of concrete debris.	
Hydrology:	Low drought tolerance; high moisture usage.	Ecosystem Services:		Roots eaten by muskrats; seeds eaten by songbirds and waterfowl.	
Ornamental Value:	Large cluster of long spikelets sessile to a green blade.	Compatibility:		Can form colonies.	
Salt Tolerance:	Very tolerant of salt.	Other:		Long lifespan. One of the few native sedges to tolerate brackish conditions.	
Shade Tolerance:	Intolerant of shade.				

Carex albicans var. emmonsii

Emmon's Sedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Perennial, to 18", densely tufted, forms small, circular mats, winter-green, green center stripe, dark purple margins on flowers, blooms and fruits in April-May.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, open woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderately drought tolerant.	Ecosystem Services:			
Ornamental Value:	Open inflorescence with long twisted awns, attractive tufted form.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of moderate shade.				

Carex annectens

Yellowfruit Sedge

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Not Available.
Form/Color	Grows 1-3' in dense tussocks, flowers greenish-yellow in May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, dry to moist soils.	Ecosystem Services:			
Hydrology:	Tolerant of flooding, intolerant of drought.				
Ornamental Value:	Greenish-yellow blooms with the inflorescence held above the stems. Grass-like leaves in dense clumps.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex appalachica

Appalachian Sedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	To 32", slender, tufted, blooms and fruits in June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Easy to grow, tolerant of several soil types.	
Habitat:	Moist, open forest understories.	Ecosystem Services:		Host to some butterflies.	
Hydrology:	Tolerant of drought and moist soil.				
Ornamental Value:	Fine textured clumps with graceful arching fruiting stems.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex atlantica

Prickly Bog Sedge

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.5-6.0
Form/Color	To 32", tufted, blooms and fruits in June-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Open swamps.	Urban Tolerance:	Adapted to medium and fines soils, high tolerance of soil compaction.		
Hydrology:	Intolerant of drought.	Ecosystem Services:	Host to some butterflies.		
Ornamental Value:	Fine green flowering stems and foliage, grows in tussocks.	Compatibility:	Not a known allelopath, moderate grower, moderate rate of vegetative spread.		
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Carex blanda

Woodland Sedge

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.4-7.0
Form/Color	Semievergreen, 8"-2' tall, tufted, waxy green, flowers whitish, blooms and fruits in May-June.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Moist to dry, often disturbed, woods, shady lawn edges.	Urban Tolerance:	Adapted to medium and fine soils, high tolerance of soil compaction.		
Hydrology:	Low tolerance to drought.	Ecosystem Services:	Wildlife value low.		
Ornamental Value:	Whitish flowers, waxy-green foliage and seed heads.	Compatibility:	Not a known allelopath, slow grower, no vegetative spread.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex communis

Fibrousroot Sedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	Perennial, 8-20" tall, forms tussocks, purplish at base.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Insufficient information to determine tolerance.
Habitat:	Mixed deciduous woods, upland oak forests.	Ecosystem Services:	Attractive to ants.		
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Ground cover, attractive tussocks.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Good substitution for <i>Carex pensylvanica</i> .		
Shade Tolerance:	Tolerant of open shade.				

Carex comosa

Bearded Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.6-7.5
Form/Color	Slow grower to 3', tufted, blooms and fruits in June-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium and fine soils, high tolerance of soil compaction.
Habitat:	Marshes, wet meadows, pond edges.	Ecosystem Services:	Wildlife value high, host to some butterflies.		
Hydrology:	Tolerant of flooding.				
Ornamental Value:	Long drooping thick yellow seed heads.	Compatibility:	Not a known allelopath, slow grower, moderate rate of vegetative spread.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex crinita

Fringed Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-7.5
Form/Color	To 4', tufted, blooms and fruits in May-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to medium and fine soils, high tolerance of soil compaction.
Habitat:	Open swamp forests, marshes.	Ecosystem Services:	Moderately palatable by some animals.		
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Staggered drooping seed heads turning from yellow to brown, grows in bunches.	Compatibility:	Not a known allelopath, moderate grower, no vegetative spread.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex debilis

White-Edge Sedge

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.6-6.6
Form/Color	Perennial, to 3', tufted, looks similar to grass, blooms and fruits in May-June.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse and medium soils, high tolerance of soil compaction.
Habitat:	Swamp forest edges, moist woods.	Ecosystem Services:	Host to some butterflies.		
Hydrology:	Intolerant of drought.				
Ornamental Value:	Fine textured drooping seed heads, grows in bunches.	Compatibility:	Not a known allelopath, moderate grower, no vegetative spread.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex folliculata

Northern Long Sedge

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Acidic soils.
Form/Color	Perennial, clumped, 1-3' tall, tufted, blooms and fruits in June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet woods, wet meadow, moist upland sites.	Ecosystem Services:			
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Attractive tufts	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex intumescens

Bladder Sedge

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.8-6.9
Form/Color	To 32", tufted, blooms and fruits in May-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Adapted to medium and fine soils, high tolerance of soil compaction.	
Habitat:	Open swamp forests, wet meadows, floodplain forests.	Ecosystem Services:		Host to some butterflies.	
Hydrology:	Intolerant of drought.				
Ornamental Value:	Large star-like seeds heads sessile to the flowering stem, grows in bunches.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex lupulina

Hop Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 6.2-7.0
Form/Color	Perennial, to 8-51", solitary stems or small clumps, blooms and fruits in June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet meadows, pond edges.	Urban Tolerance:		Adapted to medium and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Seeds eaten by birds and small mammals, plant eaten by some mammals.	
Ornamental Value:	Large clustered seed head in an oval-like form are distinctive.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Carex lurida

Shallow Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.9-6.8
Form/Color	To 3', tufted, blooms and fruits in June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet, open soil of marshes, wet meadows.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Host to some butterflies.	
Ornamental Value:	Green flowers and foliage, yellow fruit clustered in a long oval-like form.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Carex pensylvanica

Pennsylvania Sedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 5.0
Form/Color	Semievergreen, 20" tall, tufts leafy and reddish, forms patchy ground cover, blooms in March-May.	Stormwater Tolerance:		Tolerant of stormwater.	
Habitat:	Upland oak, mixed deciduous woods, dry, sandy soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderately drought tolerant.	Ecosystem Services:		Seeds eaten by birds and small mammals, plant eaten by some mammals.	
Ornamental Value:	Attractive small tufts.	Compatibility:		Colonial from rhizomes or stolons.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of open shade.				

Carex platyphylla

Broadleaf Sedge

Native To:	Regional	Wetland Indicator:	UPL	Soil:	Not Available.
Form/Color	Grows to 16"; stems tufted; waxy pale green basal wide leaves; blooms and fruits May-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Rich, mixed deciduous woods.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moist to average; well drained.	Ecosystem Services:		Host plant for butterflies	
Ornamental Value:	Very wide tufted leaves are distinctive.	Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Minor species for increased diversity and aesthetics in restoration of woodland understories.	
Shade Tolerance:	Tolerant of shade.				

Carex radiata

Eastern Star Sedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Circumneutral soils.
Form/Color	Perennial, densely tufted, to 32" tall, very slender, blooms and fruits in June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist woods, open forest understories.	Ecosystem Services:		Host to some butterflies.	
Hydrology:	Low tolerance of drought.				
Ornamental Value:	Tufted, slender leaves.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex rosea

Rosy Sedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Circumneutral soils.
Form/Color	Perennial, densely tufted, 32" tall, inflorescence of small clusters, blooms and fruits in June-July.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist woods, usually near wetland edges.	Ecosystem Services:		Host to some butterflies.	
Hydrology:	Low tolerance of drought.				
Ornamental Value:	Tufted slender leaves.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex scoparia

Pointed Broom Sedge

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.6-6.9
Form/Color	To 3', tufted, blooms and fruits in May-August. Green foliage with nodding or arching inflorescence on flowering stems.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist to temporary shallow water of marshes, open swamp forests, wet meadows.	Urban Tolerance:		Adapted to medium and fine soils, high tolerance of soil compaction.	
Hydrology:	Intolerant to drought.	Ecosystem Services:		Wildlife value low, mildly palatable to larger animals.	
Ornamental Value:	Attractive foliage and flowering stems.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex stipata

AWI-Fruited Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.9-7.9
Form/Color	Slow grower to 3', tufted, blooms and fruits in May-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet meadows, swamps.	Urban Tolerance:		Should tolerate concrete debris.	
Hydrology:	Tolerant of drought and brief flooding.	Ecosystem Services:		Moderately palatable to browse animals.	
Ornamental Value:	Upright flowering fleshy stems with spike-like inflorescence at the apex, grows in clumps.	Compatibility:		Not a known allelopath, slow grower, slow rate of vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex stricta

Tussock Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 3.5-7.0
Form/Color	Moderate grower to 3', densely tufted, forms permanent, low tussocks, blooms and fruits in May-August.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Shallow, calm, undisturbed swamps, freshwater tidal areas, margins of woodland ponds.	Urban Tolerance:		Adaptable, moderate tolerance of soil compaction, performs well in the right of way.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Wildlife value high, host to some butterflies.	
Ornamental Value:	Large tussock forming sedge with clustered brown seed heads at the ends of the flowering stems.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Carex swanii

Swan's Sedge

Native To:	New York City	Wetland Indicator:	FACU	Soil:	Not Available.
Form/Color	Perennial, tufted, to 3' tall, reddish at base, densely flowered, pale grayish-green.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Upland forest understory, disturbed woods.	Urban Tolerance:		Tolerates disturbed habitats.	
Hydrology:	Moderately drought tolerant.	Ecosystem Services:		Host to some butterflies.	
Ornamental Value:	Tufted form.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of shade.				

Carex virescens

Ribbed Sedge

Native To: New York City **Wetland Indicator:** UPL **Soil:** Not Available.

Form/Color To 40", tufted, pale green plant, blooms and fruits in May-July. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Dry woods, thickets. **Urban Tolerance:** Insufficient information to determine tolerance.

Hydrology: Moderately drought tolerant. **Ecosystem Services:** Host to some butterflies.

Ornamental Value: **Compatibility:**

Salt Tolerance: Insufficient information to determine tolerance. **Other:**

Shade Tolerance: Tolerant of partial shade.

Carex vulpinoidea

Fox Sedge

Native To: New York City **Wetland Indicator:** OBL **Soil:** pH 6.8-8.9

Form/Color Slow grower to 3', tufted, blooms and fruits June-August. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Moist to wet meadows, marshes. **Urban Tolerance:** Should tolerate concrete debris.

Hydrology: Tolerant of flooding. **Ecosystem Services:** Wildlife value high, host to some butterflies.

Ornamental Value: Green flowers and foliage, yellow to brown seed heads on flowering stems shorter than the leaves. **Compatibility:** Not a known allelopath, moderate grower, no vegetative spread.

Salt Tolerance: Intolerant of salt. **Other:**

Shade Tolerance: Tolerant of partial shade.

Cenchrus longispinus

Common Sandbur

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Annual, to 32", tufted, blooms and fruits in July-October, spiny inflorescence.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, sandy soil, fill, usually coastal.	Ecosystem Services:			
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Tufted form.	Compatibility:		Can become weedy.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Common in dry waste sites. Spiny burs are extremely sharp and barbed and can be a nuisance.	
Shade Tolerance:	Intolerant of shade.				

Chasmanthium laxum

Northern Sea Oats

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 5.0-7.0
Form/Color	Perennial, moderate grower up to 4', forms in clumps, upright form with nodding seed heads.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
		Urban Tolerance:		Moderate tolerance of soil compaction, tolerant of poor soil, performs well in the right of way.	
Habitat:	Moist to well-drained sites, moderate or greater shade.	Ecosystem Services:		Seed eaten by birds and rodents, host to some butterfly species.	
Hydrology:	Moderate tolerance to drought.				
Ornamental Value:	Panicles of flat and broad seed heads turning from green to gold dangle from very slender stems adding fall and winter interest.	Compatibility:		May become weedy.	
Salt Tolerance:	Tolerant of salt.	Other:		Requires low levels of fertility; tolerates wind.	
Shade Tolerance:	Tolerant of shade.				

Cinna arundinacea

Stout Woodreed

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.0-8.5
Form/Color	Tall woodland grass with nodding inflorescence. To 5', stems few together, blooms and fruits in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Moist woods, swamp forests.	Urban Tolerance:		Should tolerate concrete debris, tolerant of disturbed conditions.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Highly palatable to deer and grazing animals.	
Ornamental Value:	Turns a nice straw color and has a feathery texture.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:		One of very few tall woodland grasses to bloom in the summer.	
Shade Tolerance:	Tolerant of shade.				

Cyperus diandrus

Umbrella Flatsedge

Native To:	New York City	Wetland Indicator:	FACW	Soil:	Not Available.
Form/Color	Annual, to 8", blooms and fruits in June-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet to moist soil, shores.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Wildlife value high, host to some butterflies.	
Ornamental Value:	Scales of this sedge become pigmented with a beautiful red-purple color as they mature.	Compatibility:		May become weedy.	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Cyperus grayi

Gray's Flatsedge

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	To 16", blooms and fruits in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry, sandy soil or fill, open areas, beaches.	Ecosystem Services:			
Hydrology:	Moderately drought tolerant.				
Ornamental Value:		Compatibility:			
Salt Tolerance:	Tolerant of salt.	Other:		Grows in dry sterile soil where many other plants can't.	
Shade Tolerance:	Intolerant of shade.				

Danthonia compressa

Flattened Oatgrass

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.8-7.0
Form/Color	To 8", flowering stems to 32", leaves short, fine, densely tufted, blooms and fruits in June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Adapted to coarse, medium, and fine soils, no tolerance of soil compaction.	
Habitat:	Moist to dry open woods.	Ecosystem Services:		Wildlife value low.	
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Low growing grass with long flowering stem.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:		Often infected by an endophytic fungus.	
Shade Tolerance:	Tolerant of partial shade.				

Danthonia spicata

Poverty Oatgrass

Native To:	New York City	Wetland Indicator:	UPL	Soil:	Acidic soils.
Form/Color	Perennial, tufted, inflorescence to 2', leaves to 5", blooms and fruits in May-September. Low growing grass with long flowering stem.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Fairly tolerant of disturbance.
Habitat:	Dry, sterile soil of open woods and edges, tolerant of a wide range of habitats.	Ecosystem Services:	Insects feed on foliage.		
Hydrology:	Moderately drought tolerant.				
Ornamental Value:	Inflorescence is spike-like and turns a straw-like color.	Compatibility:	Does not tolerate taller ground cover competition.		
Salt Tolerance:	Insufficient information to determine tolerance.	Other:	Seeds can remain dormant for a number of decades.		
Shade Tolerance:	Tolerant of light shade.				

Deschampsia caespitosa

Tufted Hairgrass

Native To:	Regional	Wetland Indicator:	FACW	Soil:	pH 3.5-7.5
Form/Color	To 3.5', densely tufted, blooms and fruits in June-August, wiry, short, flowers purplish.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Adapted to coarse, medium, and fine soils, high tolerance of soil compaction.
Habitat:	Wet soil, shores, cool banks.	Ecosystem Services:	Host to some butterflies.		
Hydrology:	Low tolerance to drought.				
Ornamental Value:	Tall erect stems with leaves in a basal tuft. Panicle inflorescence is loosely branched and somewhat nodding.	Compatibility:	Not a known allelopath, moderate grower, no vegetative spread.		
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Deschampsia flexuosa

Common Hairgrass

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.8-6.8
Form/Color	Perennial, slow grower to 3', tufted, wiry, blooms and fruits in June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Adapted to coarse and medium soils, no tolerance of soil compaction.	
Habitat:	Dry, open woods, fields.	Ecosystem Services:			
Hydrology:	Moderate tolerance to drought.				
Ornamental Value:	Thin wiry basal leaves with long arching flowering stems. Graceful inflorescence turning a nice straw color.	Compatibility:		Not a known allelopath, moderate grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Dichanthelium clandestinum

Deertongue

Native To:	New York City	Wetland Indicator:	FAC+	Soil:	pH 4.0-7.5
Form/Color	Slow grower to 2', grows in bunches, green foliage up to 1" wide, brown seeds, active in spring and summer.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Adapted to coarse, medium, and fine soils, low tolerance of soil compaction.	
Habitat:	Moist, often sandy ground, floodplains and thickets on stream banks; borders, and clearings; marshy ground, ditches.	Ecosystem Services:		Highly palatable to browse animals.	
Hydrology:	High tolerance to drought.				
Ornamental Value:	Green to yellow with small hairs along stem and inflorescence. Terminal flowering panicle in early summer.	Compatibility:		Not a known allelopath, slow grower, no vegetative spread.	
Salt Tolerance:	Low tolerance of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Dichanthelium latifolium

Broadleaf Rosette Grass

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 4.0-6.5
Form/Color	Rapid grower to 3', grows in bunches, active in Summer, blooms in Spring.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Forests and thickets.	Urban Tolerance:		Adapted to coarse and medium soils, no tolerance of soil compaction.	
Hydrology:	Moderate tolerance to drought.	Ecosystem Services:		Moderately palatable to browse animals.	
Ornamental Value:	Broad-leaved grass growing in rosettes. Terminal flowering panicle with delicate flowers and seeds.	Compatibility:		Not a known allelopath, rapid grower, can spread by rhizomes.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Moderately tolerant of shade.				

Distichlis spicata

Salt-Grass

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.0-10.5
Form/Color	Moderate grower to 16", plant usually reclining, gray-green, tan in autumn, blooms and fruits in August-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	High salt marsh.	Urban Tolerance:		Adapted to medium and fine soils, high tolerance of soil compaction.	
Hydrology:	Tolerant of saltwater to 50 ppt, tolerant of spring tide flooding.	Ecosystem Services:		Wildlife value low.	
Ornamental Value:	Low- growing, high marsh grass. A companion plant to Spartina patens. Thick flowering heads turning a straw like color.	Compatibility:		Often codominant with Spartina patens. Can form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:		One of very few grasses to tolerate salt marshes.	
Shade Tolerance:	Intolerant of shade.				

Dulichium arundinaceum

Three-Way Sedge

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.7-7.5
Form/Color	To 3', blooms and fruits in July-October, leaves in three ranks.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open freshwater marshes, tidal areas, pond edges.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Permanently saturated soil or flooding to 1 ft. Not drought tolerant.	Ecosystem Services:		Wildlife value moderate, host to some butterflies.	
Ornamental Value:	Architectural upright form, colonial habit. Green to yellow foliage with radiating leaves all along the stem.	Compatibility:		Not a known allelopath, moderate grower, slow rate of vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Elymus canadensis

Canada Wild Rye

Native To:	New York City	Wetland Indicator:	FACU+	Soil:	pH 5.0-7.9
Form/Color	Perennial, tufted, 5' tall, waxy pale-gray-green, spikelets in pairs at each node, blooms and fruits in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist rocky, sandy soil.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, low tolerance of soil compaction.	
Hydrology:	Moderate tolerance to drought.	Ecosystem Services:		Moderately palatable to browse animals.	
Ornamental Value:	Long arching or drooping inflorescence made up of bristly spikelets with curving awns. Can grow up to 4 ft high with long pointed leaves along the stem.	Compatibility:		Not a known allelopath, rapid grower, no vegetative spread.	
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Elymus hystrix

Bottlebrush Grass

Native To: New York City **Wetland Indicator:** UPL **Soil:** Not Available.

Form/Color: To 5', little branched with blades up to 12" long. Blooms and fruits in June-August. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Upland open woods, gaps. **Urban Tolerance:** Tolerant of air pollution.

Hydrology: Tolerant of drought. **Ecosystem Services:** Attractive to birds.

Ornamental Value: Showy inflorescence that resemble bottle brushes. **Compatibility:**

Salt Tolerance: Insufficient information to determine tolerance. **Other:** Often infected by endophytic fungi.

Shade Tolerance: Tolerant of partial shade.

Elymus riparius

Streambank Wild Rye

Native To: New York City **Wetland Indicator:** FACW **Soil:** pH 4.5-7.2

Form/Color: To 3', tufted, blooms and fruits in July-September. **Stormwater Tolerance:** Insufficient information to determine tolerance.

Habitat: Moist woods, stream banks. **Urban Tolerance:** Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.

Hydrology: Low tolerance to drought. **Ecosystem Services:**

Ornamental Value: Drooping inflorescence made up of bristly spikelets with shorter awns than E. canadensis. **Compatibility:** Not a known allelopath, moderate growth rate, no vegetative spread.

Salt Tolerance: Intolerant of salt. **Other:**

Shade Tolerance: Tolerant of partial shade.

Elymus virginicus

Virginia Wild Rye

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.0-7.4
Form/Color	To 4', culms unbranched and leaves up to 12" long. Blooms and fruits in June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open, moist woods.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Moderate tolerance to drought.	Ecosystem Services:		Highly palatable to browse animals.	
Ornamental Value:	Upright growing habit and inflorescence made up of thick bristly spikelets.	Compatibility:		Not a known allelopath, moderate growth rate, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Eragrostis spectabilis

Purple Lovegrass

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.0-7.5
Form/Color	To 2', stems usually in low tufts, blooms and fruits in August-September, inflorescence purple.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Tolerates dry, sandy soil or fill.	Urban Tolerance:		Adapted to coarse and medium soils, no tolerance of soil compaction.	
Hydrology:	High tolerance to drought.	Ecosystem Services:		Moderately palatable to browse animals.	
Ornamental Value:	Low growing, showy purple inflorescence in fall. Green thin leaves can have a reddish tinge.	Compatibility:		Not a known allelopath, moderate grower, moderate rate of vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Glyceria canadensis

Rattlesnake Mannagrass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-8.5
Form/Color	Moderate grower to 3', stems solitary or few together, blooms and fruits in June-August.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Marshes, open, wet woods.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, moderate tolerance of soil compaction.	
Hydrology:	Tolerant of flooding to 50% of growing season.	Ecosystem Services:		Wildlife value moderate, eaten by muskrat and deer.	
Ornamental Value:	Graceful drooping inflorescence with spikelets laterally compressed in an oval shape.	Compatibility:		Intolerant of competition. Can form colonies.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Glyceria obtusa

Coastal Mannagrass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-7.0
Form/Color	To 3', blooms and fruits in July-September, inflorescence dense.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamps, wet woods.	Urban Tolerance:		Adapted to medium and fine soils, high tolerance of soil compaction.	
Hydrology:	Low tolerance to drought.	Ecosystem Services:		Moderately palatable to browse animals.	
Ornamental Value:	Distinctive upright form with dense ovoid inflorescence.	Compatibility:		Not a known allelopath, rapid grower, moderate rate of vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of shade.				

Glyceria striata

Fowl Mannagrass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-8.0
Form/Color	Slow to moderate grower to 4', tufted, blooms and fruits in June-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamp forests, shrub swamps.	Urban Tolerance:		Adapted to medium and fine soils, high tolerance of soil compaction.	
Hydrology:	Tolerant of flooding.	Ecosystem Services:		Wildlife value moderate.	
Ornamental Value:	Early flowering grass with a wide open, delicate drooping inflorescence.	Compatibility:		Not a known allelopath, moderate grower, slow rate of vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Juncus canadensis

Canadian Rush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.5-5.9
Form/Color	To 3', tufted, leaves erect, terete and septate, blooms and fruits in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Swamps, marshes, wet shores.	Urban Tolerance:		Adapted to coarse, medium, and fine soils, high tolerance of soil compaction.	
Hydrology:	Intolerant of drought.	Ecosystem Services:		Host to some butterflies.	
Ornamental Value:	Spreading inflorescence with stout, rigid stems. Numerous small flowers with a reddish to chesnut brown tinge.	Compatibility:		Not a known allelopath, rapid grower, no vegetative spread.	
Salt Tolerance:	Moderately tolerant of salt.	Other:		Although called Canada rush, species barely enters southeastern Canada, being more widespread in the eastern United States.	
Shade Tolerance:	Moderately tolerant of shade.				

Juncus effusus

Soft Rush

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 5.5-7.0
Form/Color	Semievergreen, slow grower to 3', tufted, spreading, blooms and fruits in July-September.	Stormwater Tolerance:	Tolerant of stormwater.		
Habitat:	Wet meadows, freshwater tidal and nontidal marshes, ditches, pond edges.	Urban Tolerance:	Adapted to variety of soils, moderate tolerance of soil compaction, performs well in the right of way.		
Hydrology:	Tolerant of flooding.	Ecosystem Services:	Wildlife value high, host to some butterflies.		
Ornamental Value:	Upright clump-forming rush with bright green hollow leaves. Compact inflorescence mid-way up the stem.	Compatibility:	Not a known allelopath, moderate grower, no vegetative spread.		
Salt Tolerance:	Intolerant of salt.	Other:	Tough, reliable plant, resistant to goose depredations once established.		
Shade Tolerance:	Tolerant of partial shade.				

Juncus gerardii

Black Grass

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	Not Available.
Form/Color	To 16", tufted, blooms and fruits in June-September, inflorescence is dark.	Stormwater Tolerance:	Potentially tolerant of stormwater.		
Habitat:	High salt marsh.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Tolerates some flooding.	Ecosystem Services:	Provides nesting habitat, attracts waterfowl.		
Ornamental Value:	Tufted form.	Compatibility:	Can form colonies.		
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Juncus greenei

Greene's Rush

Native To:	New York City	Wetland Indicator:	FAC	Soil:	Not Available.
Form/Color	To 32", erect, stem dark green and terete; tufted; brownish compact inflorescence blooms and fruits in June-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Open pine barrens, lake shores, dunes, often associated with disturbance.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Moderate drought tolerance, prefers dry well drained soils.	Ecosystem Services:			
Ornamental Value:	Erect, densely tufted form.	Compatibility:		Can spread by rhizomes.	
Salt Tolerance:	Moderate salt tolerance.	Other:			
Shade Tolerance:	Not shade tolerant.				

Juncus tenuis

Path Rush

Native To:	New York City	Wetland Indicator:	FAC-	Soil:	pH 4.5-7.0
Form/Color	Slow grower to 28", tufted, blooms and fruit in July-September.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Disturbed sites, dry to moist woods.	Urban Tolerance:		Tolerant of trampling, compacted soil, and fill.	
Hydrology:	Tolerant of drought, moderately tolerant of flooding.	Ecosystem Services:		Wildlife value moderate.	
Ornamental Value:	Low-growing, colonial rush with green foliage and an inflorescence turning brown.	Compatibility:		Not a known allelopath, slow grower, no vegetative spread.	
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Leersia oryzoides

Rice Cut-Grass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.1-8.8
Form/Color	Moderate grower to 5', sprawling, rough leaves, saw toothed, blooms and fruits in June-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of concrete debris.
Habitat:	Freshwater nontidal marshes, wet ditches, open swamp forests.	Ecosystem Services:			
Hydrology:	Tolerant of flooding, drought.				
Ornamental Value:	Forming dense colonies, this upright grass is yellow-green in color. The panicle is open and drooping with seed heads covered in minute bristles.	Compatibility:	Aggressively colonial, may crowd out less aggressive plants.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Tolerant of partial shade.				

Leersia virginica

White Grass

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 4.5-8.5
Form/Color	To 5', sprawling, blooms and fruit in July-October.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of concrete debris.
Habitat:	Wet woods, along trails, disturbed sites.	Ecosystem Services:	Host to some butterflies.		
Hydrology:	Intolerant of drought.				
Ornamental Value:	Grass with soft-textured foliage and a slender inflorescence with few spikelets.	Compatibility:	Not a known allelopath, moderate grower, moderate rate of vegetative spread.		
Salt Tolerance:	Intolerant of salt.	Other:	Can be differentiated from the similar looking invasive Japanese stiltgrass by short retrorse hairs at each node along the culm.		
Shade Tolerance:	Tolerant of shade.				

Luzula multiflora

Common Wood-Rush

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.8-5.4
Form/Color	To 16', tufted, leaves often purplish, blooms and fruits in April-June.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Dry to moist mixed deciduous or oak woods.	Ecosystem Services:			
Hydrology:	Dry soils.				
Ornamental Value:	Tufted form.	Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Tolerant of bright shade.				

Muhlenbergia capillaris

Pink Muhly Grass

Native To:	Regional	Wetland Indicator:	FACU	Soil:	pH 5.8-6.8
Form/Color	Grows to 24"-36" high and wide; pink flowers in fall; copper foliage color in fall; brown, oval inconspicuous fruit; moderate grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
		Urban Tolerance:		Tolerant of urban conditions.	
Habitat:	Well drained soils.	Ecosystem Services:		Seeds and fruit eaten by birds.	
Hydrology:	Very drought tolerant; tolerant of flooding; well drained.				
Ornamental Value:	Attractive noticeable clouds of pink flowers.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:		Very adaptable grass; used in wetlands and beachfronts; low maintenance.	
Shade Tolerance:	Moderately tolerant of shade.				

Panicum virgatum

Switchgrass

Native To:	New York City	Wetland Indicator:	FAC	Soil:	pH 4.5-7.5
Form/Color	Tall upright clump forming grass. Slow grower to 6', tufted, blooms and fruits in July-September.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Back dunes, dry to wet meadows, successional shrub lands, grasslands, upper edges of salt marsh.	Urban Tolerance:		Urban Tolerance:	Tolerant of sterile, acid, sandy soil, low nutrient fill, performs well in the right of way.
Hydrology:	Tolerant of flooding, drought.	Ecosystem Services:		Ecosystem Services:	Wildlife value high.
Ornamental Value:	Attractive clumps. Large open panicles turning from green to a straw-like color.	Compatibility:		Compatibility:	Does not compete well with mugwort or other aggressive weeds in high-nutrient soils.
Salt Tolerance:	Moderately tolerant of salt.	Other:		Other:	
Shade Tolerance:	Tolerant of partial shade.				

Rhynchospora alba

White Beak Rush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Acidic soils.
Form/Color	To 28", tufted, blooms and fruits in July-September.	Stormwater Tolerance:		Stormwater Tolerance:	Insufficient information to determine tolerance.
Habitat:	Sphagnum bogs, sandy or acid peaty soil.	Urban Tolerance:		Urban Tolerance:	Insufficient information to determine tolerance.
Hydrology:	Intolerant of drought, tolerant of flooding.	Ecosystem Services:		Ecosystem Services:	Host to some butterflies.
Ornamental Value:		Compatibility:		Compatibility:	
Salt Tolerance:	Insufficient information to determine tolerance.	Other:		Other:	
Shade Tolerance:	Intolerant of shade.				

Rhynchospora capitellata

Brownish Beak Rush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	Acidic soils.
Form/Color	To 32", tufted, leaves flat and narrow; several flowers along stem bloom and fruit in July-October.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Wet open ground, bogs, wet sand, needs acid soil.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Intolerant of drought, tolerant of flooding.	Ecosystem Services:		Host to some butterflies.	
Ornamental Value:		Compatibility:			
Salt Tolerance:	Insufficient information to determine tolerance.	Other:			
Shade Tolerance:	Intolerant of shade.				

Saccharum giganteum

Sugarcane plumegrass

Native To:	Regional	Wetland Indicator:	FACW+	Soil:	pH 3.5-7.0
Form/Color	Grows to 10' tall; reedlike stems; green flower blooms in summer; fast grower.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Coarse and medium textured soils; open, moist sandy areas; bogs; swales.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Intolerant of drought; medium moisture usage.	Ecosystem Services:		Minor provider of food for terrestrial birds.	
Ornamental Value:	Giant grass growing 6-10 ft with large fluffy terminal panicles of reddish-peach seed heads.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Schizachyrium littorale

Coastal Little Bluestem

Native To:	New York City	Wetland Indicator:	NI	Soil:	Circumneutral soils.
Form/Color	To 1-2', bunch grass, warm season grass grows in late spring throughout summer.	Stormwater Tolerance:			Insufficient information to determine tolerance.
		Urban Tolerance:			Insufficient information to determine tolerance.
Habitat:	Frontal back dunes, secondary dunes.	Ecosystem Services:			Provides cover for ground birds and small mammals.
Hydrology:	Tolerant of drought, minimally tolerant of flooding.				
Ornamental Value:	Blue-green leaves atop a spreading clump form. Turning a rust color with white fluffy seeds in the fall.	Compatibility:			
Salt Tolerance:	Moderately tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Schizachyrium scoparium

Little Bluestem

Native To:	New York City	Wetland Indicator:	FACU-	Soil:	pH 5.0-8.4
Form/Color	To 4', densely tufted, flowers bluish purple, becomes dark orange-gold over winter, blooms and fruits in September-October.	Stormwater Tolerance:			Tolerant of stormwater.
		Urban Tolerance:			Adapted to coarse, medium, and fine soils, no tolerance of soil compaction.
Habitat:	Old fields, open areas, back dunes, dry, acid soils.	Ecosystem Services:			Highly palatable to graze animals, moderately palatable to browse animals.
Hydrology:	High tolerance to drought.				
Ornamental Value:	Bluish purple foliage with an upright columnar form, turning a straw-like gold in winter with white fluffy seeds.	Compatibility:			Not a known allelopath, moderate grower, no vegetative spread.
Salt Tolerance:	Intolerant of salt.	Other:			Used for restoring grasslands and dry, open habitats, sandy soil.
Shade Tolerance:	Intolerant of shade.				

Schoenoplectus pungens

Common Threesquare

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 3.7-7.5
Form/Color	Erect triangular stem; spikelet of sharp brown scales; blooms brown June-September; produces brown achene fruit.	Stormwater Tolerance:		Potentially tolerant of stormwater.	
Habitat:	Wet sandy, gravelly, peaty shores; pond, lake, river marshy streams; fresh to brackish water; inland marshes.	Urban Tolerance:		Used in bioretention cells, raingardens, vegetated swales.	
Hydrology:	Found in wetlands. Low drought tolerance.	Ecosystem Services:		Waterfowl and small mammals.	
Ornamental Value:	Rhizomatous bulrush with trigonous blue-green stems. Spiklets sessile to the stem and radiating, turning a dark brown.	Compatibility:		Can form colonies.	
Salt Tolerance:	Tolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Schoenoplectus tabernaemontani

Softstem Bulrush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.4-7.4
Form/Color	Rhizomatous; to 9'; red flower blooms in late Spring.	Stormwater Tolerance:		Insufficient information to determine tolerance.	
Habitat:	Salt marshes and flats, river or stream floodplains, edges of wetlands.	Urban Tolerance:		Insufficient information to determine tolerance.	
Hydrology:	Intolerant of drought; high moisture usage.	Ecosystem Services:		Seeds eaten by waterfowl.	
Ornamental Value:	Tall bulrush reaching up to 9 feet tall. Smooth rounded green-blue stems have a terminal spreading inflorescence that turns reddish- brown.	Compatibility:			
Salt Tolerance:	Low tolerance of salt.	Other:		Found throughout North America. Stems have relatively large air cavities, which make it compress easily when squeezed.	
Shade Tolerance:	Intolerant of shade.				

Scirpus atrovirens

Dark-green Bulrush

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.0-8.0
Form/Color	Moderate grower to 4', tufted, blooms and fruits in July-August.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Wet meadows, swamps, wet thickets.	Urban Tolerance:	Tolerant of disturbance.		
Hydrology:	Low drought tolerance; medium moisture usage.	Ecosystem Services:	Host to some butterflies, seeds eaten by waterfowl, roots eaten by muskrats and geese, provides cover for nesting birds.		
Ornamental Value:	Dark green stems can reach up to 4.5 ft high. The terminal inflorescence holds brown dense spiklets that radiate in all different directions.	Compatibility:			
Salt Tolerance:	Intolerant of salt.	Other:	Also known as green bulrush or black bulrush.		
Shade Tolerance:	Tolerant of partial shade.				

Scirpus cyperinus

Wool Grass

Native To:	New York City	Wetland Indicator:	FACW+	Soil:	pH 4.8-8.0
Form/Color	Moderate grower to 5', tufted, blooms and fruits in August-October, flowers greenish, becoming wooly brown.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Freshwater tidal and nontidal marshes, wet fill, swamps.	Urban Tolerance:	Probably tolerant of concrete debris.		
Hydrology:	Tolerant of flooding, tolerates saturated soil 25% of growing season.	Ecosystem Services:	Wildlife value high, seeds eaten by waterfowl, muskrats, host to some butterflies.		
Ornamental Value:	Tall grass-like upright form reaching 4-5 ft high. The dense terminal inflorescence has a wooly-like appearance when in seed, turning a nice light brown.	Compatibility:	Can form colonies.		
Salt Tolerance:	Intolerant of salt.	Other:			
Shade Tolerance:	Intolerant of shade.				

Sorghastrum nutans

Indiangrass

Native To:	New York City	Wetland Indicator:	UPL	Soil:	pH 4.8-8.0
Form/Color	Tall rhizomatous perennial from 3-7 ft tall. Bunch; yellow flower color in late spring; moderate grower.	Stormwater Tolerance:		Stormwater Tolerance:	Tolerant of stormwater.
Habitat:	Grasslands, meadows, fields, shores of rivers or lakes, wetland margins	Urban Tolerance:		Urban Tolerance:	Tolerant of urban conditions, performs well in the right of way.
Hydrology:	Medium tolerance of drought; medium moisture usage.	Ecosystem Services:		Ecosystem Services:	Provides cover for pheasants, mourning doves, and songbirds.
Ornamental Value:	Inflorescence changing from purple-yellow bloom to a bronze like narrow seed head.	Compatibility:		Compatibility:	Can form colonies.
Salt Tolerance:	Moderately tolerant of salt.	Other:		Other:	Long lifespan, often used in tall grass prairie restorations.
Shade Tolerance:	Intolerant of shade.				

Sparganium eurycarpum

Giant Bur-seed

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.0-8.5
Form/Color	Grows to 5'; flowering stem in a zig-zag pattern, green flower and green foliage; moderate grower.	Stormwater Tolerance:		Stormwater Tolerance:	Insufficient information to determine tolerance.
Habitat:	Edges of open ponds in shallow water.	Urban Tolerance:		Urban Tolerance:	Insufficient information to determine tolerance.
Hydrology:	Intolerant of drought; high moisture usage.	Ecosystem Services:		Ecosystem Services:	Provides moderate amount of food for small mammals and minor amount of food for waterbirds.
Ornamental Value:	Erect sword-like green leaves on this semi-aquatic plant. The flowering stem holds globe-like green-white flowers that turn into a densely globular seed head.	Compatibility:		Compatibility:	Can form colonies.
Salt Tolerance:	Intolerant of salt.	Other:		Other:	Moderate lifespan.
Shade Tolerance:	Moderately tolerant of shade.				

Spartina alternifolia

Salt-Marsh Cordgrass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 4.5-8.5
Form/Color	Tall low marsh grass that can grow from 2 to 4.5', stems disintegrate in winter, blooms and fruits in July-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Low salt marsh.	Urban Tolerance:	Tolerant of alkaline fill, concrete debris.		
Hydrology:	Tolerant of ocean water to 35 ppt salt, intolerant of drought.	Ecosystem Services:	Wildlife value moderate, eaten by Canada geese, muskrats.		
Ornamental Value:	It will spread extensively by rhizomes and produces a spike-like inflorescence turning golden yellow in the fall.	Compatibility:	Can form colonies.		
Salt Tolerance:	Very tolerant of salt.	Other:	Roots used for stabilizing shore areas and decreasing destruction cause by storm tides and wave action; moderate lifespan.		
Shade Tolerance:	Intolerant of shade.				

Spartina cynosuroides

Big Cordgrass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 5.8-7.5
Form/Color	Moderate grower to 9', blooms and fruits in August-October, yellow flower blooms in spring.	Stormwater Tolerance:	Insufficient information to determine tolerance.		
Habitat:	Brackish high tidal marsh, freshwater marshes.	Urban Tolerance:	Insufficient information to determine tolerance.		
Hydrology:	Tolerant of brackish water to 10 ppt salt, Intolerant of drought.	Ecosystem Services:	Wildlife value low, eaten by Canada geese, muskrat, cover for waterfowl, wading birds, shorebirds.		
Ornamental Value:	The inflorescence is large, spreading and flowers in the late summer. The seed head has 20-40 long spikes.	Compatibility:	Can form colonies.		
Salt Tolerance:	Very tolerant of salt.	Other:	Long lifespan.		
Shade Tolerance:	Intolerant of shade.				

Spartina pectinata

Prairie Cordgrass

Native To:	New York City	Wetland Indicator:	OBL	Soil:	pH 6.0-8.5
Form/Color	To 7', blooms and fruits in July-September, has a distinctive comb-like inflorescence, rapid grower.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Should be tolerant of concrete debris.
Habitat:	Brackish to freshwater shores, marshes.	Ecosystem Services:	Low nutrition value; provides cover for game, songbirds, and small mammals.	Compatibility:	
Hydrology:	Low drought tolerance; high moisture usage; poor drainage.	Other:	Long lifespan.		
Ornamental Value:	The colorful inflorescence is large and spreading in a distinctive comb-like form.				
Salt Tolerance:	Low tolerance of salt.				
Shade Tolerance:	Intolerant of shade.				

Tridens flavus

Purpletop

Native To:	New York City	Wetland Indicator:	FACU	Soil:	pH 4.5-6.5
Form/Color	This tall erect grass can reach 3-6.5 ft tall. Tufted, blooms and fruits in August-October, inflorescence dark purple.	Stormwater Tolerance:	Potentially tolerant of stormwater.	Urban Tolerance:	Tolerant of low-nutrient soils. Used for bioretention.
Habitat:	Roadsides, fields, dry, open woods.	Ecosystem Services:	Host to some butterflies.	Compatibility:	Can form colonies.
Hydrology:	Tolerant of drought.	Other:	Used for bioretention.		
Ornamental Value:	Purple panicles bloom in a pyramidal form and droop when they are in seed.				
Salt Tolerance:	Intolerant of salt.				
Shade Tolerance:	Intolerant of shade.				

Tripsacum dactyloides

Gamma Grass

Native To:	New York City	Wetland Indicator:	FACW	Soil:	pH 5.1-7.5
Form/Color	To 8', densely tufted, robust plants, large underground stems, blooms and fruits in June-September.	Stormwater Tolerance:	Insufficient information to determine tolerance.	Urban Tolerance:	Tolerant of soil compaction.
Habitat:	Open marshes.	Ecosystem Services:	Host to some butterflies and their larvae, host to larvae of moth <i>Amphipoea erepta</i> , seeds eaten by deer and birds.		
Hydrology:	Tolerant of brackish water.				
Ornamental Value:	Delicate red to orange stamens hang from a long inflorescence on male plants. The seed pods resemble fingers or claws.	Compatibility:	Can form colonies. Rhizomes can be visible above the earth.		
Salt Tolerance:	Low tolerance of salt.	Other:	Distant relative to corn. Known to sometimes compete with invasive species like <i>Phragmites</i> . One of very few grasses with unisexual flowers.		
Shade Tolerance:	Intolerant of shade.				

Stormwater Tolerant Plants

Stormwater plantings have become a growing feature in the urban landscape. These include plantings within parks, such as rain gardens, as well as in the right of way, such as greenstreets. The proper plant selection is crucial to ensure that the installation thrives; plants intolerant of the variably wet and dry conditions of these spaces will not survive, while well-chosen plants will thrive. In many cases, such as stormwater capture greenstreets, the plants have better success than their non-stormwater counterparts. Tolerance of salt, sediments, seasonally high rates of water flow as well as drought due to the sandy soil often used are all crucial in selecting the ideal species.

Stormwater Tolerant Native Plants

As shown in the plant species pages preceding, a number of New York City's native plant species are able to grow and thrive in the manmade environments of stormwater systems. They are repeated here for the reader's convenience. Parks has field tested these species for at least three years to gauge their performance. Note that these species can provide a wider array of benefits than simply a tolerance of stormwater planting conditions. Many species can provide food and habitat for native birds and insects, as well as enhancing the aesthetic appeal of the area. These plants should be considered first when selecting a palette of plants for a rain garden or other stormwater planting.

SCIENTIFIC NAME

COMMON NAME

PLANTS THAT TOLERATE PERIODS OF INUNDATION

TREES

<i>Acer rubrum</i>	Red Maple
<i>Amelanchier arborea</i>	Downy Serviceberry
<i>Amelanchier canadensis</i>	Shadblow Serviceberry
<i>Amelanchier laevis</i>	Allegheny Serviceberry
<i>Betula nigra</i>	River Birch
<i>Betula populifolia</i>	Grey Birch
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Celtis occidentalis</i>	Common Hackberry
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Nyssa sylvatica</i>	Black Tupelo
<i>Platanus occidentalis</i>	American Sycamore
<i>Quercus bicolor</i>	Swamp White Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus phellos</i>	Willow Oak

SHRUBS

<i>Clethra alnifolia</i>	Sweet Pepperbush
<i>Cornus amomum</i>	Silky Dogwood
<i>Cornus racemosa</i>	Grey Dogwood
<i>Cornus sericea</i>	Red-osier Dogwood
<i>Ilex glabra</i>	Inkberry
<i>Ilex verticillata</i>	Winterberry
<i>Lindera benzoin</i>	Spicebush
<i>Morella pennsylvanica</i>	Bayberry
<i>Photinia melanocarpa</i>	Black Chokeberry
<i>Photinia pyrifolia</i>	Red Chokeberry
<i>Rosa carolina</i>	Carolina Rose
<i>Rosa palustris</i>	Swamp Rose
<i>Rosa virginiana</i>	Virginia Rose

FORBS

<i>Asclepias incarnata</i>	Swamp Milkweed
<i>Chelone glabra</i>	Turtlehead
<i>Eutrochium dubium</i>	Joe Pye Weed
<i>Hibiscus moscheutos</i>	Rose-mallow
<i>Iris versicolor</i>	Large Blue Flag
<i>Lobelia cardinalis</i>	Cardinal Flower
<i>Vernonia noveboracensis</i>	New York Ironweed

GRASSES

<i>Acorus americanus</i>	Sweet Flag
<i>Juncus effusus</i>	Soft Rush
<i>Panicum virgatum</i>	Switchgrass

PLANTS FOR SLOPES OF SWALES - MOIST TO DRY SOILS

TREES

<i>Ilex opaca</i>	American Holly
<i>Magnolia virginiana</i>	Sweetbay Magnolia
<i>Ulmus americana</i>	American Elm

SHRUBS

<i>Gaylussacia baccata</i>	Black Huckleberry
<i>Hamamelis virginiana</i>	Common Witchhazel
<i>Ilex glabra</i>	Inkberry

Lindera benzoin
Lyonia mariana
Spiraea tomentosa
Viburnum dentatum
Viburnum lentago

Spicebush
Piedmont Staggerbush
Hardhack
Arrowwood Viburnum
Nannyberry Viburnum

FORBS

Asclepias tuberosa
Solidago canadensis
Solidago rugosa
Symphotrichum novae-angliae
Verbena hastata

Butterfly Weed
Canadian Goldenrod
Wrinkleleaf Goldenrod
New England Aster
Swamp Verbena

FERNS

Onoclea sensibilis

Sensitive Fern

PLANTS FOR UPLAND AREAS - RARELY MOIST TO DRY SOILS

TREES

Crataegus crus-galli
Juniperus virginiana
Quercus rubra

Cockspur Hawthorn
Eastern Redcedar
Red Oak

SHRUBS

Prunus maritima
Rhus aromatica

Beach Plum
Fragrant Sumac

PERENNIALS

Rudbeckia hirta
Oenothera biennis

Black-Eyed Susan
Common Evening Primrose

GRASSES

Carex pennsylvanica
Sorghastrum nutans
Schizachyrium scoparium

Pennsylvania Sedge
Indian Grass
Little Bluestem

FERNS

Dennstaedtia punctilobula

Hay-scented Fern

Other Stormwater Tolerant Plants

There are situations and locations where, despite the best of intentions, a native plant will not be the right plant for the site. In other instances, a mixture of native and non-native species allows for a wider array of aesthetic options and diversity of plants. The list that follows is of plants that perform well, particularly in the right of way, but the majority are not native to New York City or the surrounding region. Included on this list are ornamental cultivars of some native plants. These cultivars do not occur naturally in the region, and are not suited for planting in natural ecosystems. However, due to concerns about visibility and sight lines, as well as urban tolerance and aesthetic considerations, they merit consideration in right of way stormwater plantings.

SCIENTIFIC NAME

COMMON NAME

PLANTS THAT TOLERATE PERIODS OF INUNDATION

TREES

Amelanchier lamarkii
Amelanchier x grandiflora
Carpinus betulus
Chionanthus retusus
Chionanthus virginicus
Platanus x acerifolia
Quercus acutissima
Taxodium distichum

Juneberry
 Apple Serviceberry
 European Hornbeam
 Chinese Fringetree
 White Fringetree
 London Planetree
 Sawtooth Oak
 Common Baldcypress

SHRUBS

Itea virginica

Sweetspire

PERENNIALS

Monarda didyma

Bee Balm

GRASSES

Carex elata
Carex glauca
Hakonechloa macra

Golden Sedge
 Blue Sedge
 Japanese Forest Grass

PLANTS FOR SLOPES OF SWALES - MOIST TO DRY SOILS

TREES

Cornus kousa
Cornus mas
Gleditsia triacanthos var. inermis
Gymnocladus dioicus
Hamamelis x intermedia
Koelreuteria paniculata
Metasequoia glyptostroboides

Kousa Dogwood
 Cornelian cherry Dogwood
 Thornless Common Honeylocust
 Kentucky Coffeetree
 Witchhazel
 Panicked Goldenraintree
 Dawn Redwood

Parrotia persica
Prunus sargentii
Prunus serrulata
Quercus imbricaria
Quercus robur
Ulmus parvifolia
Zelkova serrata

Persian Parrotia
Sargent Cherry
Japanese Flowering Cherry
Shingle Oak
English Oak
Lacebark (Chinese) Elm
Japanese Zelkova

SHRUBS

Callicarpa dichotoma
Callicarpa japonica
Caryopteris x clandonensis
Fothergilla gardenii
Hamamelis vernalis
Hydrangea quercifolia
Ilex crenata
Physocarpus opulifolius
Potentilla fruticosa
Rosa 'Radrazz'
Rosa 'Radyod'
Spiraea x bumald
Spiraea nipponica
Viburnum trilobum

Purple Beautyberry
Japanese Beautyberry
Blue Mist Shrub
Dwarf Forsythia
Vernal Witchhazel
Oakleaf Hydrangea
Japanese Holly
Ninebark
Shrubby Cinquefoil
Knockout Rose
Blushing Knockout Rose
Spirea
Snowmound Spirea
American Cranberrybush Viburnum

FORBS

Agastache nepetoides
Astilbe japonica
Geranium sanguineum
Liatris spicata
Rudbeckia fulgida
Rudbeckia subtomentosa

Giant Hyssop
Astilbe
Bloody Cranesbill
Blazing Star
Black-Eyed Susan
Sweet Coneflower

GRASSES

Calamagrostis x acutiflora 'Karl Foerster'
Pennisetum alopecuroides

Karl Foerster Feather Reed Grass
Fountain Grass

PLANTS FOR UPLAND AREAS - RARELY MOIST TO DRY SOILS

TREES

Cercis canadensis
Crataegus viridis
Eucommia ulmoides
Gingko biloba
Quercus macrocarpa

Eastern Redbud
Green Hawthorn
Hardy Rubber Tree
Gingko, Maidenhair Tree
Bur Oak

SHRUBS

Cotoneaster apiculatus
Cotoneaster horizontalis
Forsythia intermedia
Prunus laurocerasus

Cranberry Cotoneaster
Rockspray Cotoneaster
Showy Border Forsythia
Common Cherrylaurel

PERENNIALS

Echinacea purpurea

Nepeta racemosa

Nipponanthemum nipponicum

Liriope muscari

Liriope spicata

Perovskia atriplicifolia

Salvia nemerosa

Purple Coneflower

Catmint

Montauk Daisy

Lily Turf

Lily Turf

Russian Sage

Salvia

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