# Ecological and Climate Strategies in Historic Urban Park Restoration & Management

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Steve Bopp, Studio Director for Planning, Central Park Conservancy

# Learning objectives

*By the end of this session, you will be able to:*

1. Examine ambitious restoration and reforestation efforts and how institutions can align ecological restoration with broader climate and biodiversity goals
2. Find strategies for embedding ecological and climate considerations in urban park restoration and management from examples in Central Park that can be applied to other institutions or public spaces
3. Gain ideas for future innovative approaches to climate challenges in the public realm

# Agenda

*What we'll cover in this session:*

1. History of Central Park through an ecological lens and evolution of the park's management since the establishment of the Central Park Conservancy
2. Case studies and current & future initiatives related to ecological management and climate adaptation
3. Discussion and Q&A (15-20 minutes).


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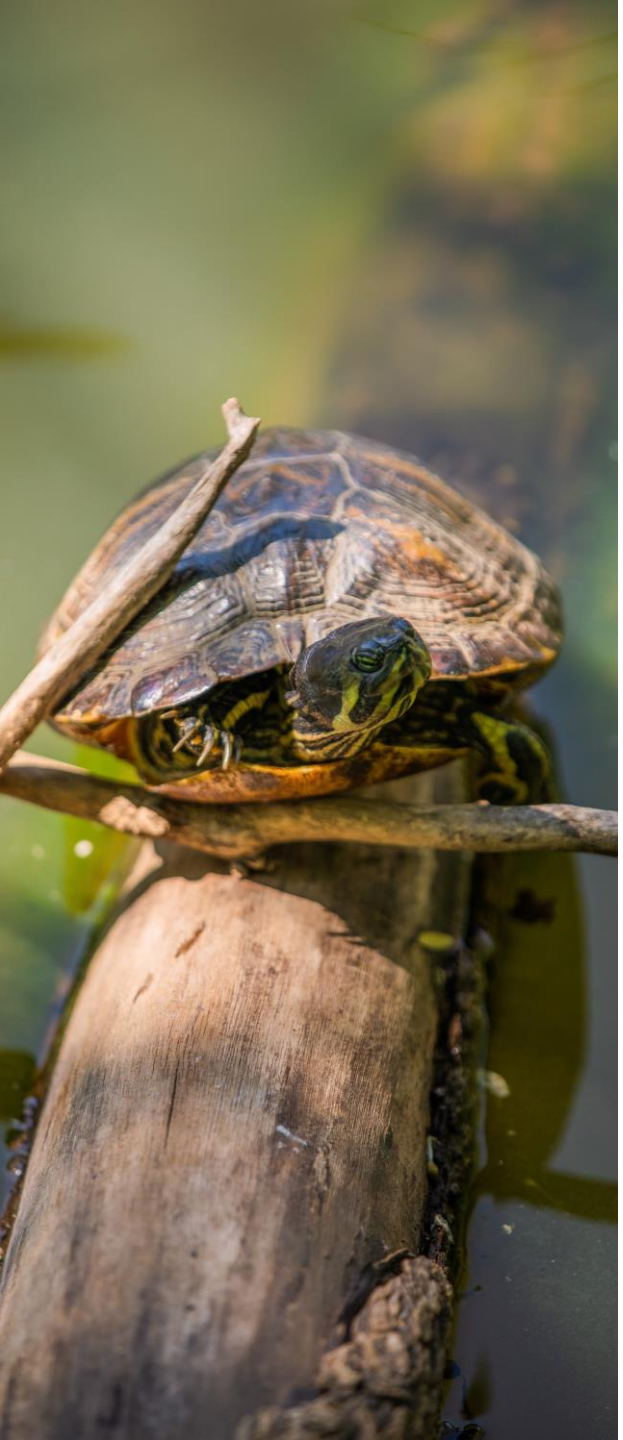
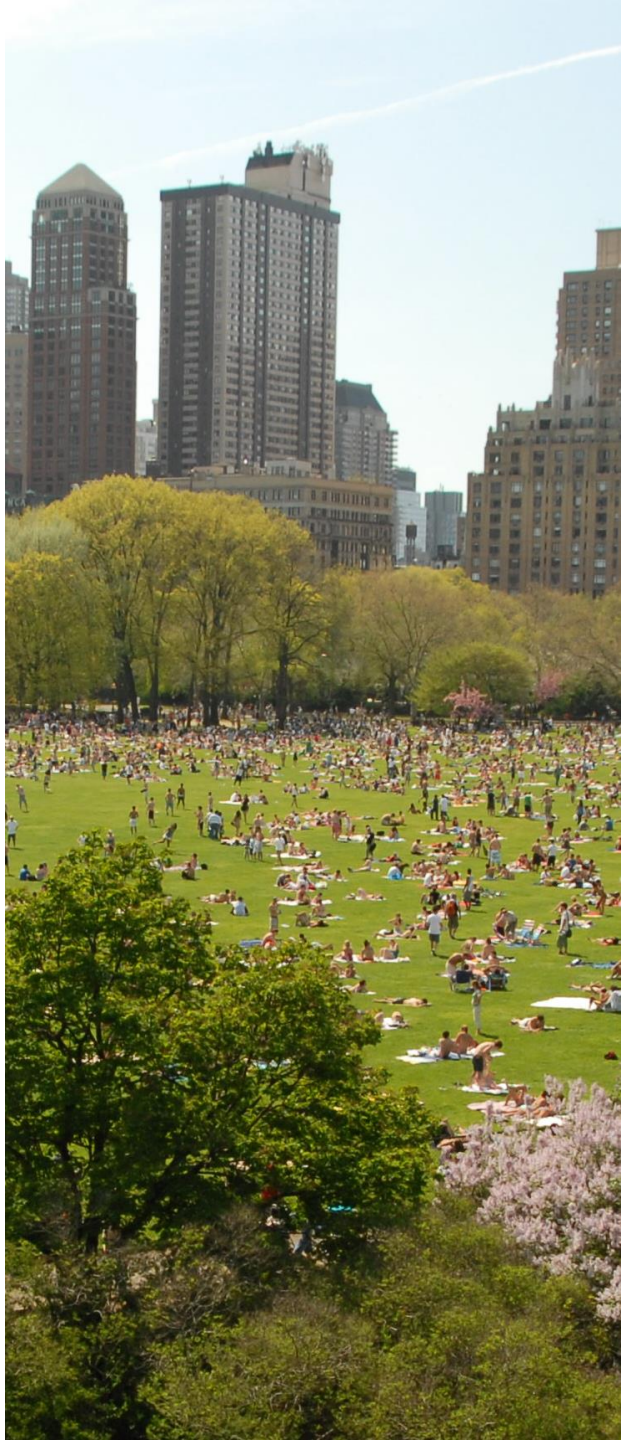
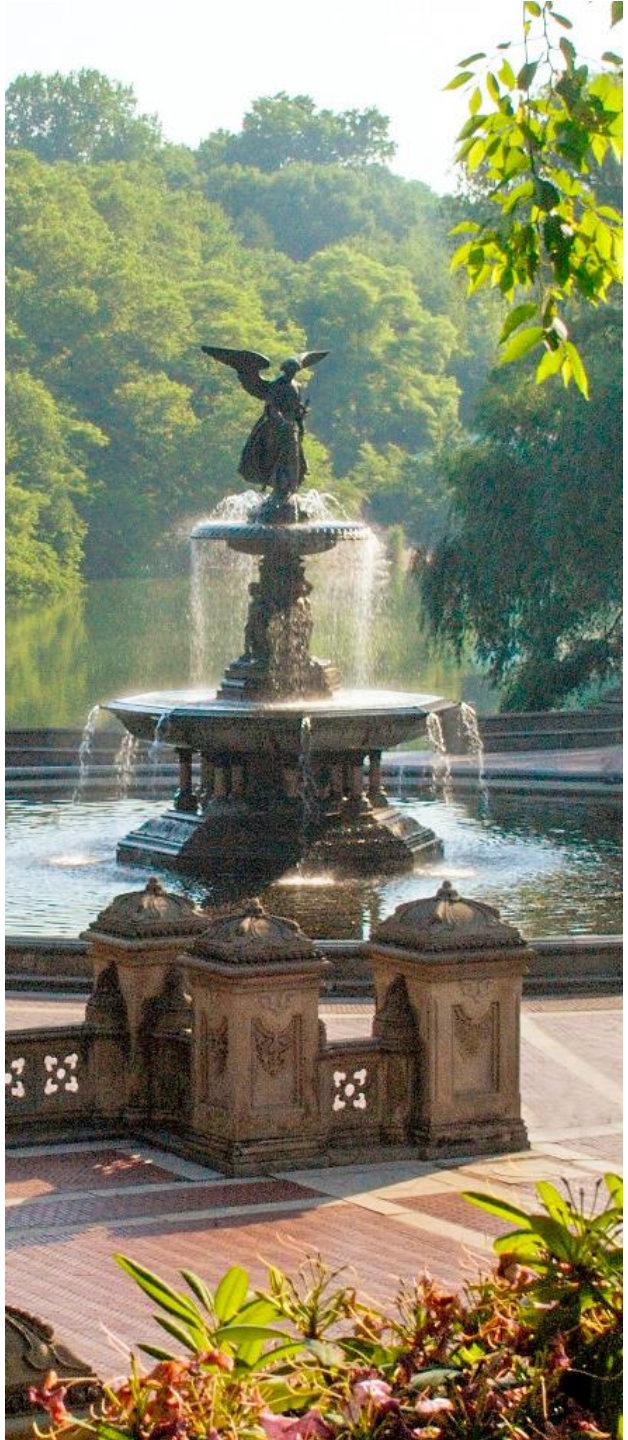
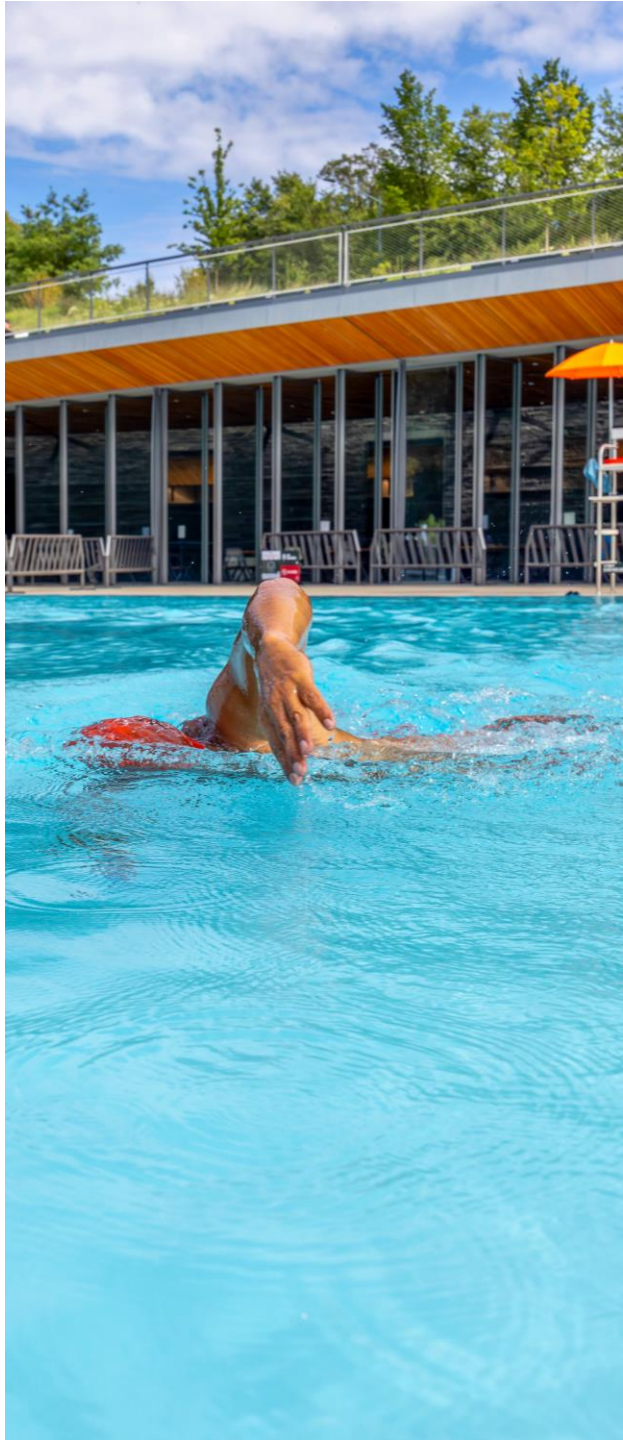
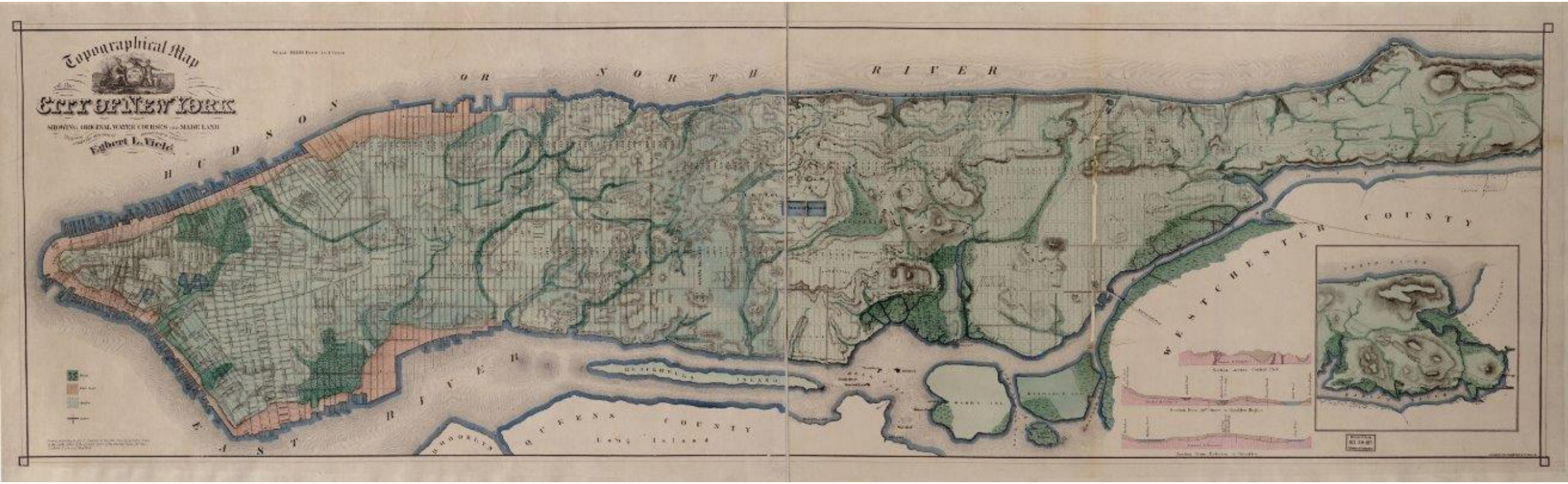
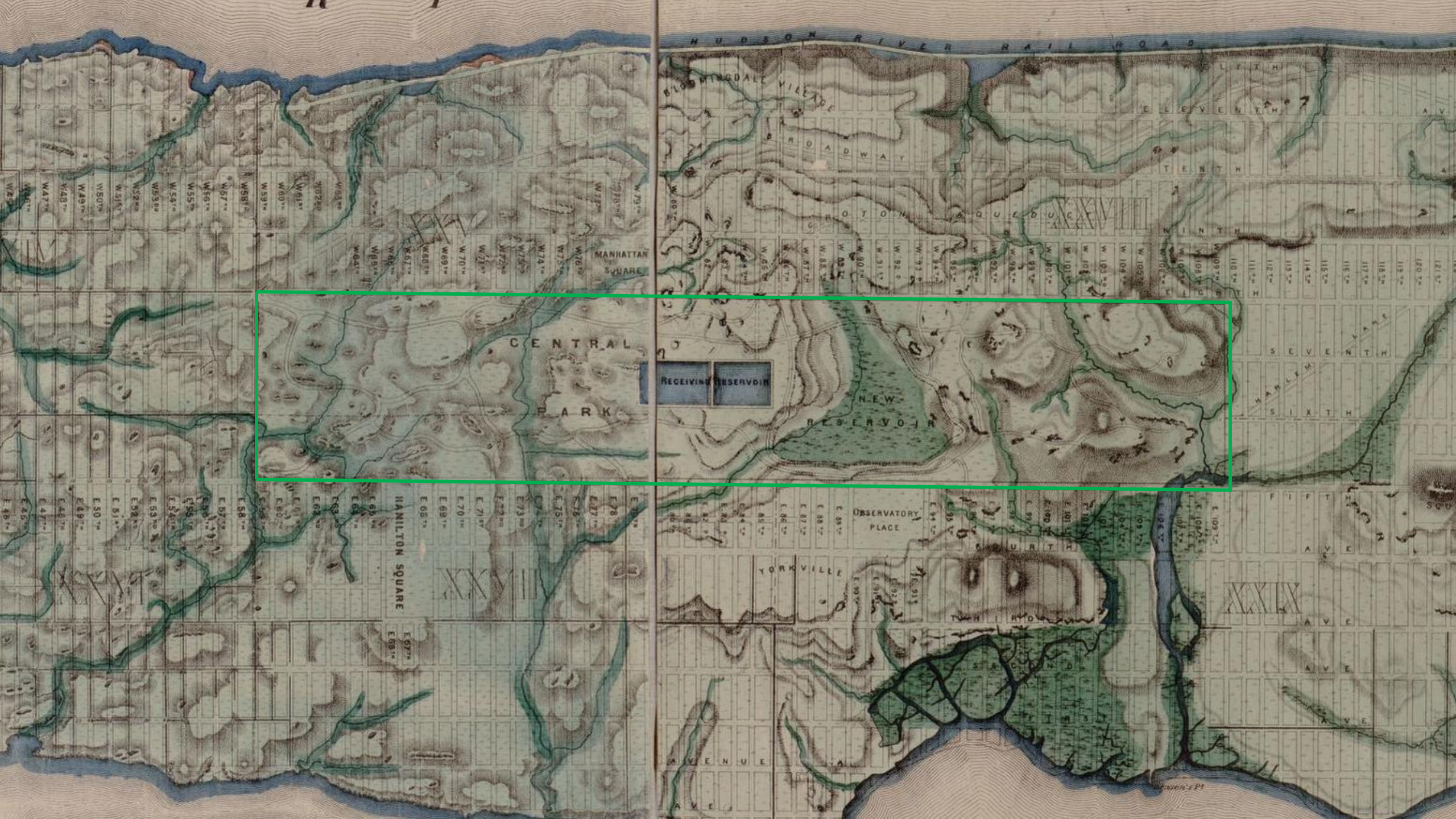





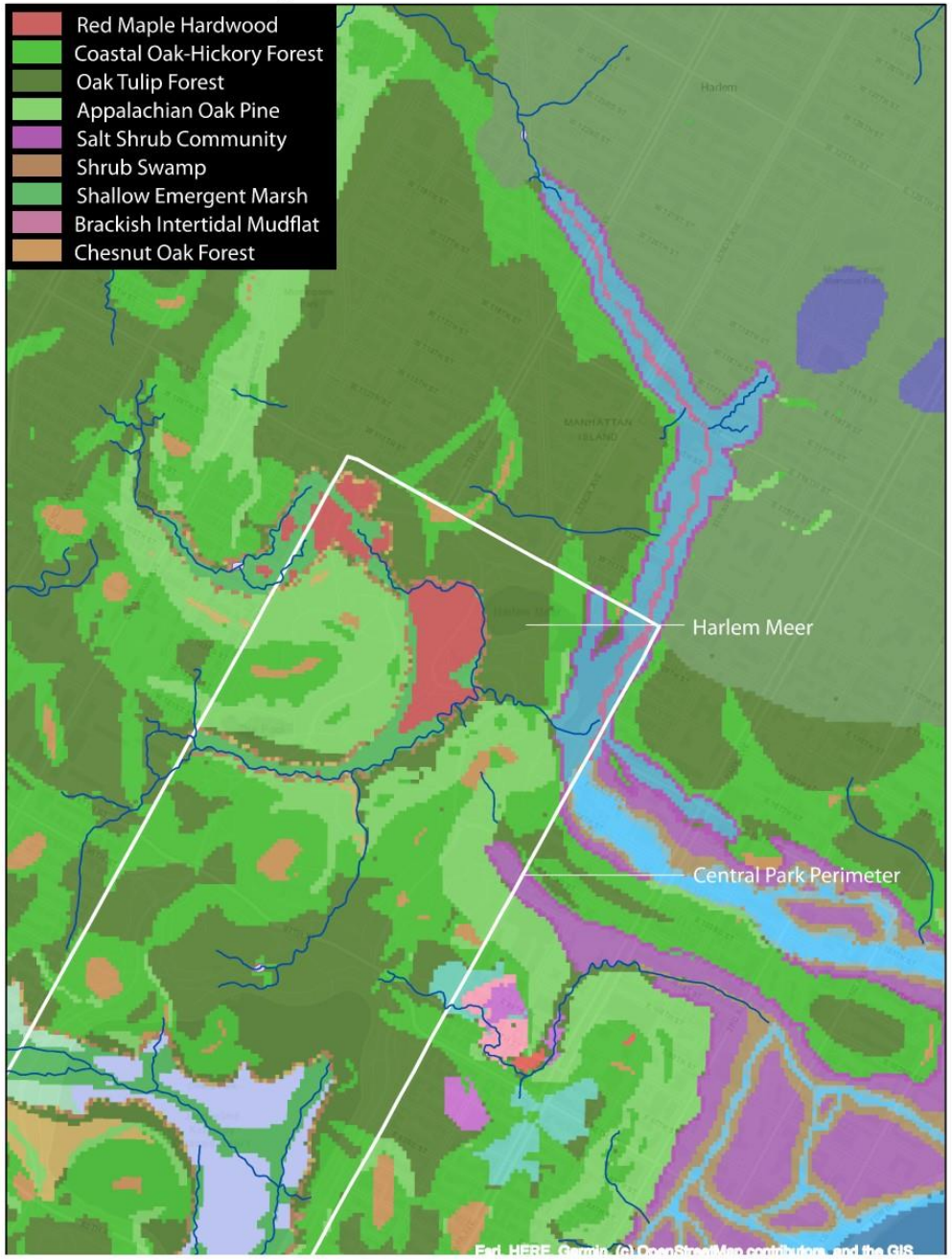





# 1865 Viele Map


HUDSON RIVER RAIL ROAD
BLOOMINGDALE VILLAGE
BROADWAY
ELEVENTH AVE
TENTH AVE
NINTH AVE
EIGHTH AVE
SEVENTH AVE
SIXTH AVE
FIFTH AVE
MANHATTAN SQUARE
CENTRAL PARK
RECEIVING RESERVOIR
NEW RESERVOIR
OBSERVATORY PLACE
FOURTH AVE
YORK VILLE
THIRD AVE
SECOND AVE
HAMILTON SQUARE
AVENUE A
AVE

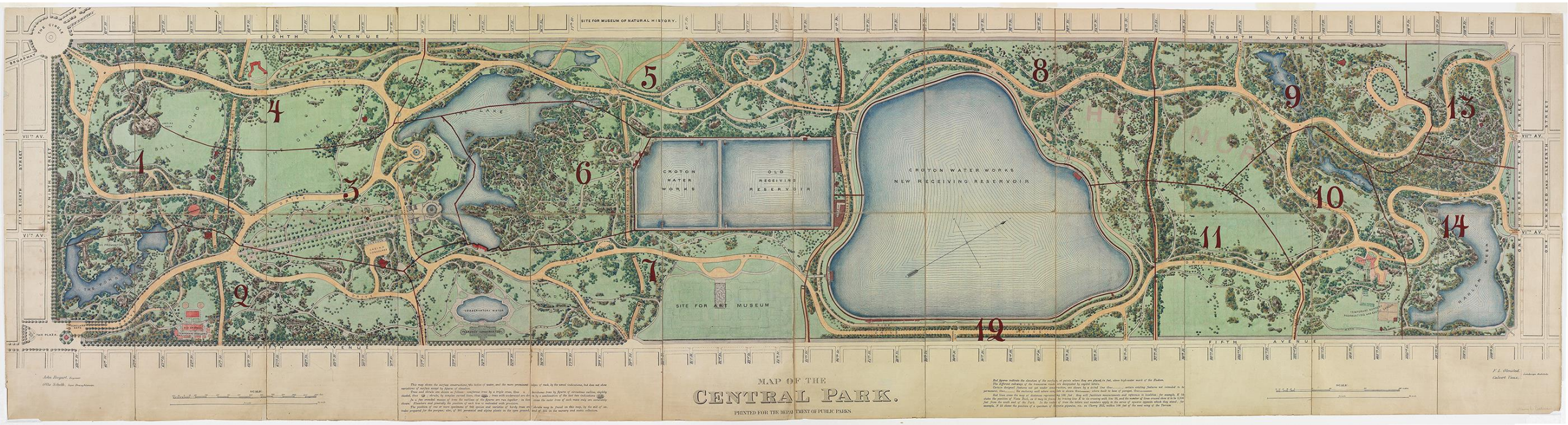
Ecological Communities of Mannahatta



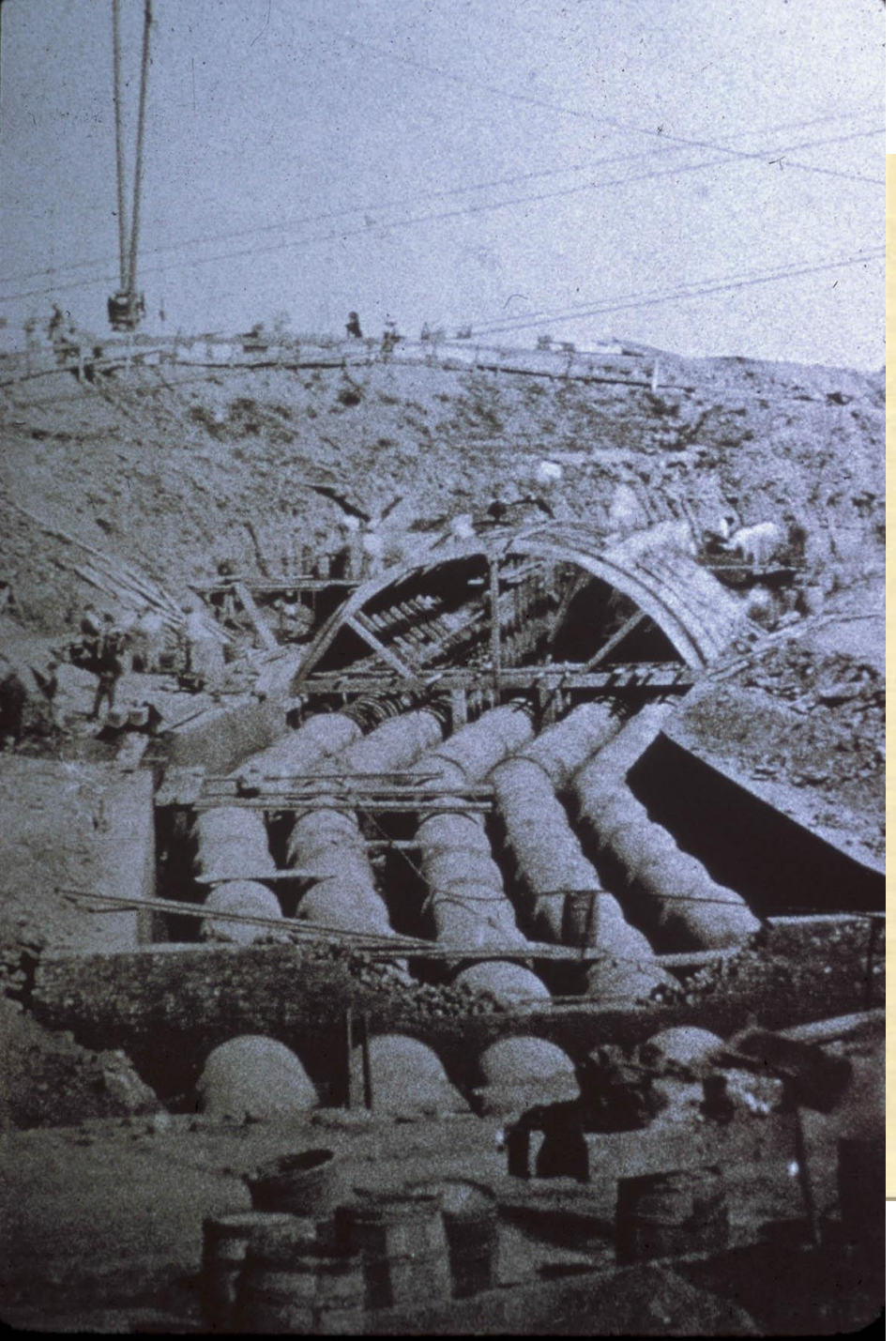


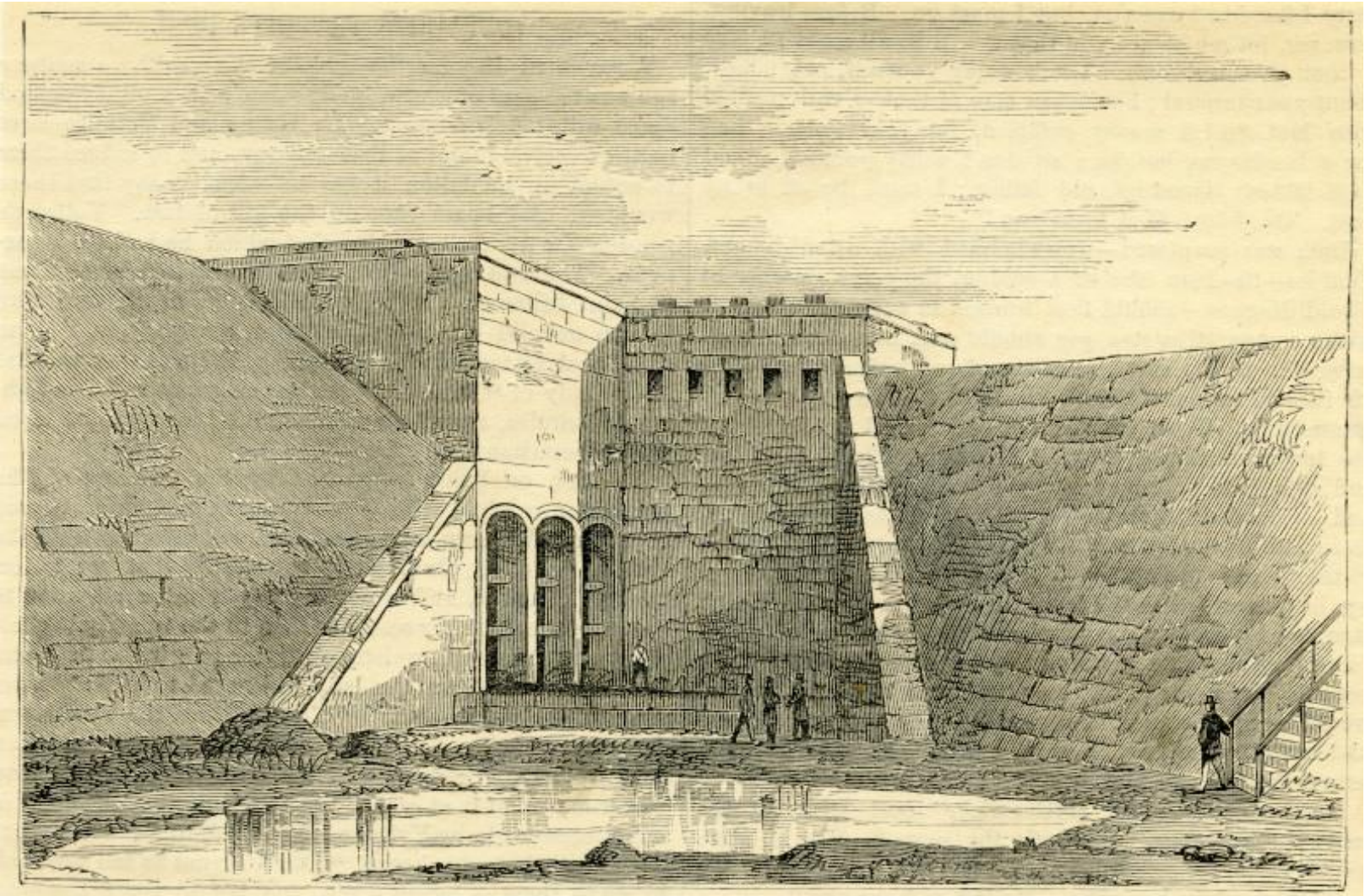

Mannahatta/
Welikia Project

Eric Sanderson




# 1873 Bogart Map





RESERVOIR, CENTRAL PARK, IN 1862.

# Restoration & Decline

**Planning, Design, & Construction**
(1853)

**First Decline**
(1879)

**Robert Moses Era**
(1934)

**Degradation**
(1970)

**Central Park Conservancy**
(1980)



Harlem Meer Boathouse early 1980s


G.W. THORNE 60 NASSAU ST. NEW YORK



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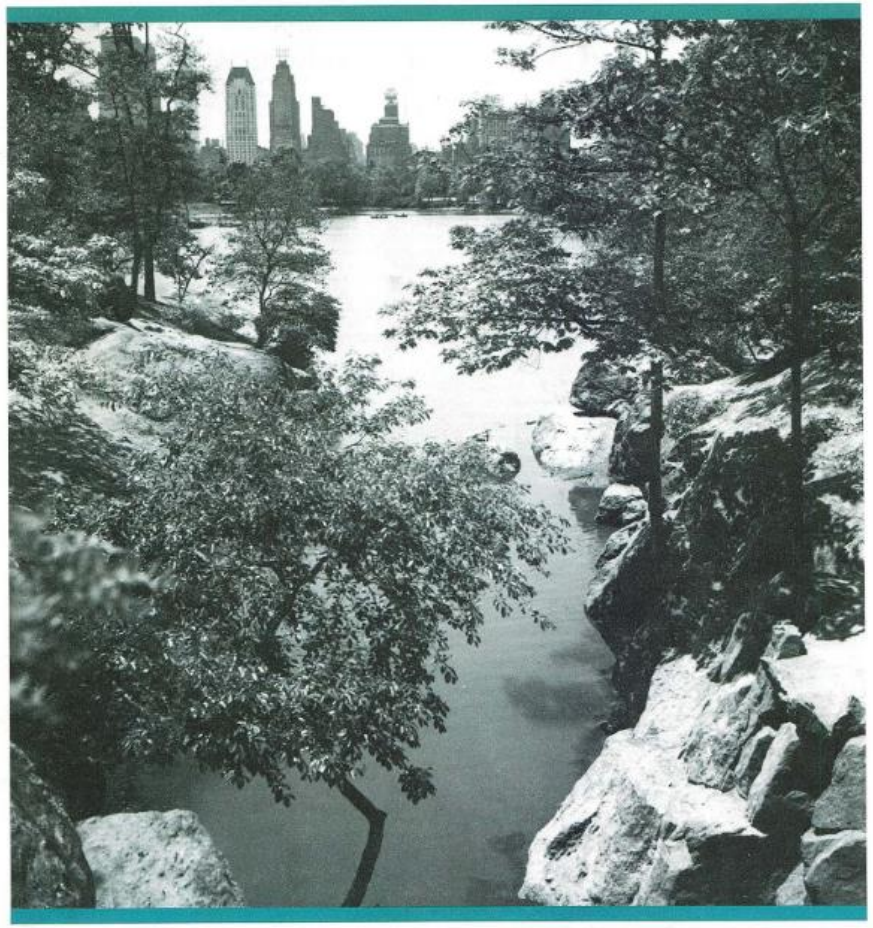
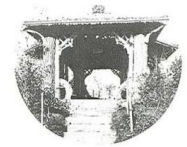
# Rebuilding Central Park:

## A Management and Restoration Plan

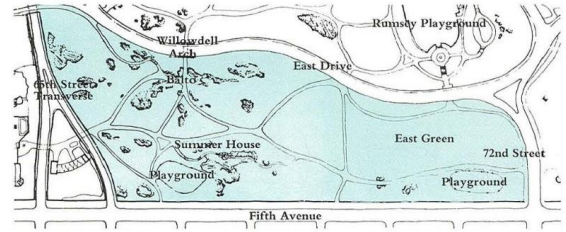
DRAFT EDITION



# The Dene










*The Summer House restored. The original is shown in photo at top of page.*

The landscape along the east perimeter of the Park from 66th Street to 72nd Street is known as the Dene. It is a combination of gently rolling lawns and shaded walks punctuated with rock outcrops. Notable features include a rustic summer house, two playgrounds and Balto (the statue of an Alaskan husky). Its easternmost walkway is a heavily used north-south pedestrian commuter route as well as a leisurely promenade between the Conservatory Water and the Central Park Zoo.

### *The First 100 Years*

Before the Park was developed, the Dene was a relatively flat site, part of a plateau from which the Mall and the Sheep Meadow were formed. Though it lies at a higher elevation than the swampy valley to the north (which became the Conservatory Water), parts of the Dene were originally a bog, particularly in the southern end, where the elevation drops off substantially.

Olmsted and Vaux made several changes in the topography of the Dene in order to increase its visual interest and rectify its drainage. Lawns were graded and seeded, trees and shrubs were planted, and by 1891, Central Park Superintendent Samuel Parsons wrote of it, "This place reminds one of an English lawn. It is five or six acres of fine turf, unbroken except by a few scattered shade trees of large size. Each tree is a fine specimen. There are horse-chestnuts and some excellent American beeches, oaks, tulip trees, maples, elms, purple beeches, liquidambers, etc."

Willowdell Arch, built in 1860, passes under the Drive and provides pedestrian access to the Mall. This red-brick arch was named for a group of large willow trees that stood nearby. They were among the few specimen trees on the mostly barren pre-Park tract of land.

The rustic summer house, which sits atop one of the Park's largest rock outcrops, affords a view of the Dene landscape and the Mall beyond. Historian Clarence Cook wrote in 1869 that the structure was positioned to maximize the Park experience. "Shut off from the view of passers in the street," he wrote, "one can find here almost as complete a seclusion, for an hour's reading or meditation, as he could obtain in the centre of the Park itself, so judicious has been the planting. . . ."

The Cricket Players' House was constructed in 1870 beside the lawn south of the 72nd Street entrance. Known first as the Cricket Ground, the lawn was later called the Croquet Ground and finally the East Green. The Cricket Players' House was eventually torn down, but the green continued to exist and has recently been resodded and serviced with a new drainage system and irrigation pipes.

Plantations of trees and shrubs were regularly added to the Dene during the first 50 years of its existence. Fifty winter honeysuckles and 70 spicebushes were planted near the summer house and along the perimeter wall in 1908 and 1909.

The two playgrounds in the Dene area were constructed in the 1930s as a part of Robert Moses's plan for a series of perimeter playgrounds—each placed near the edge of the Park for the sake of convenience and safety. The 71st Street playground was redesigned in the 1960s, and the 67th Street playground is currently in the process of being rebuilt.

### *Existing Conditions*

Over the years, nearby private schools have used the East Green for active team sports, repeatedly trampling the lawn into hardpan. As with the restoration of the Sheep Meadow, the recent rebuilding of the East Green has been followed by strict regulation. So far, no one has been allowed to use it at all. Once the grass has taken root, only passive uses will be permitted. Active sports will be diverted to the nearby Rumsey Playground, where the construction of a sports surface is planned.

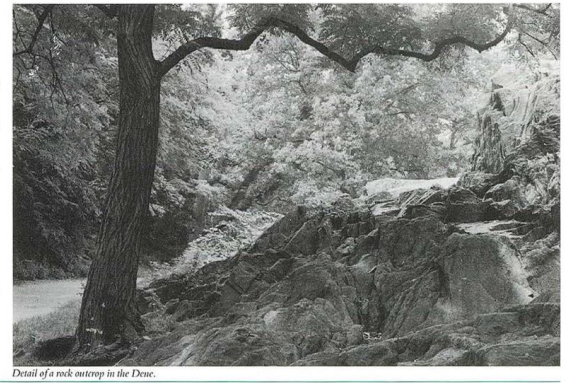
As in other parts of the Park, heavy pedestrian use of the Dene has resulted in a web of desire lines across lawns. This inevitably has led to erosion. The rock outcrops are popular for climbing and sunning, but they also encourage additional off-path foot traffic. Broken subsurface water pipes, which send water gushing to the surface, complicate matters and make some of the lawns soggy and unusable.

An exact replica of the Dene rustic shelter was rebuilt by the Central Park preservation crew in 1983. At the same time, the horticultural crew made soil improvements and planted evergreens and shrubs around the rock outcrop upon which the shelter sits. New pine trees were added to the few that were already there in order to screen Fifth Avenue from view, and the slopes along the perimeter wall from 67th to 72nd streets were partially stabilized with new soil and shrubs.

### *Recommendations*

The restoration of the Dene Project Area has already commenced with the reconstruction of the rustic shelter [completed August 1983]; the redesign and reconstruction of the 69th Street entrance [completed November 1983]; the restoration of the East Green [completed May 1984] and the rebuilding of the 67th Street playground [currently under way].

- Further restoration should continue. The drainage system should be repaired, some pathways realigned and others repaved, and new benches and drinking fountains installed.
- The slopes along the perimeter wall and the East Drive should be further stabilized with soil and plants. Lawns should be reseeded and trees pruned.
- Willowdell Arch should receive some structural repair, and broken water pipes in the drainage system under it should be corrected.



*Detail of a rock outcrop in the Dene.*

FILE
WSLF HD. 1089



Landscape Management & Restoration
Program
for the Woodlands of Central Park

Phase One Report: Consensus of the Interviews,
Key Issues & Initial Program Recommendations

October 1989



ANDROPOGON ASSOCIATES

# The Once and Future Forest

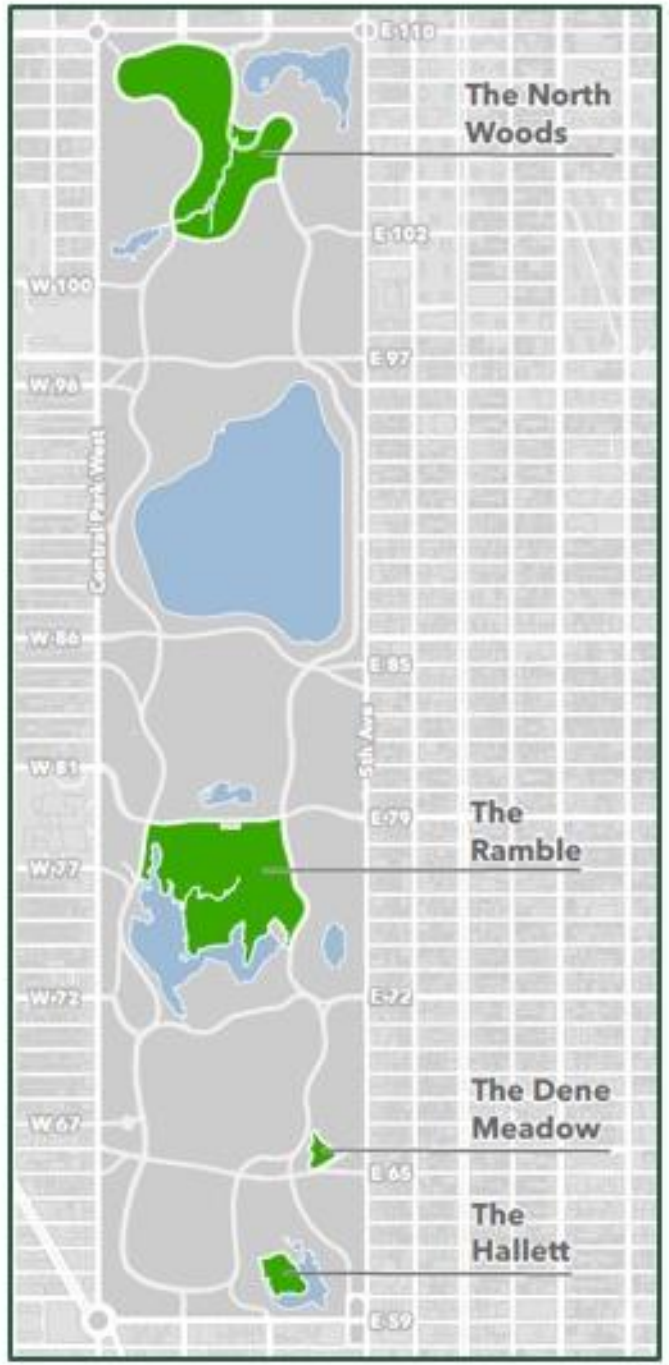
*a guide to forest restoration strategies*



LESLIE JONES SAUER *foreword by Ian McHarg*






**North Woods:** 40 acres

**The Ramble:** 36 acres

**Hallett Nature Sanctuary:** 4 acres

**Dene Slope:** 1.5 acres



Manager: Eric Whitaker










Tim Schenck


Tim Schenck

















# CENTRAL PARK IN PROGRESS | DENE SLOPE: ESTABLISHING A NATIVE MEADOW



1859 engraving of a view of the Dene landscape and rustic shelter.

Over the course of several planting seasons the Conservancy will be establishing a meadow of native grasses and wildflowers on this slope at the southwest corner of the Dene landscape. The meadow and its complement of mature canopy trees will be framed by edge plantings. At the top of the slope, rustic seating created by our skilled craftspersons will be sited to take advantage of sweeping views across the meadow toward the existing Dene rustic shelter. Native meadows are a sustainable management solution for certain landscapes. They are also habitat-enriching, and they enhance the character of the landscape in a manner consistent with the ideals of the Park's original landscape architects.

Frederick Law Olmsted wrote in 1870:
*...there is no more beautiful picture, and none can be more pleasing incidentally to the gregarious purpose, than that of beautiful meadows, over which clusters of level-armed sheltering trees cast broad shadows.*

The design that he and Calvert Vaux conceived for New York's great public space transformed the largely rocky, marshy pre-park site into a masterful composition of diverse landscape types to create an idealized expression of rural scenery. These included picturesque woods, serene lakes and ponds, and the landscape type most closely associated with Central Park and its creators—pastoral meadows. For Olmsted and Vaux, the pastoral landscape represented the key to fulfilling the essential purpose of the Park: to provide the people of the city an opportunity to retreat from it and experience the "enlarged sense of freedom" afforded by a visit to the countryside—a luxury beyond the means of most New Yorkers in the middle of the nineteenth century. The landscapes best suited to this purpose were those that contrasted with the city. Openness was essential as the antidote to the most oppressive aspect of urban life, offering relief from the crowding and confinement of the densely-developed street grid. Meadows therefore figured prominently in Olmsted and Vaux's vision for the Park, as reflected in the title of their winning competition entry for its design, which they called, simply, "Greensward."



Courtesy of the Library of Congress, LC-G3- 68-12 (f&pf)
The scale and character of meadows in the Park historically varied. The nominal meadows (i.e., Sheep Meadow, East Meadow, North Meadow) were expansive, low-lying landscapes that would become popular destinations for recreational use. But taller meadow grasses prevailed on more steeply sloped ground (as pictured here), and on small clearings within wooded areas.

The Park's designers were focused on the uplifting effect that the scenic quality of meadows would have on the human spirit. "What we want to gain," Olmsted said, referring to openness in park landscapes, "is tranquility and rest to the mind." But meadows have additional value beyond the psychological effects he emphasized. Landscapes planted with native grasses and wildflowers produce ecological and environmental benefits. In addition to supporting a broader diversity of wildlife, they are far less resource-intensive to maintain than lawns once native grasses are established at sufficient height to prevent self-seeding invasive species. This makes them a practical, sustainable treatment for steeply sloped sites and areas of poor soil quality.



Landscapes like this one (above) in northern Dutchess County and the meadow at Mt. Cuba Center, a botanical garden in Delaware (below), evoke the pastoral ideal at the heart of Olmsted and Vaux's Greensward Plan for Central Park. Swaths of native grasses and wildflowers on gently rolling ground framed by majestic trees contribute to the richness and complexity of rural scenery that changes with the seasons.



Courtesy of Mt. Cuba Center, www.mtcubacenter.org



Native meadows provide essential habitat resources for a wide variety of birds and pollinating insects. Grassland bird species nest in the shelter provided by tall grasses and feed on the abundance of insects and seeds produced by perennial grasses and wildflowers. And the dozens of butterfly species that reside within the limits of New York City are attracted to the more brightly-colored wildflowers as a source of nectar.

## HOW DO YOU MAKE A MEADOW?

Establishing a native meadow is a process that involves a stepped approach over multiple seasons.



### SITE PREPARATION

The process begins with the elimination of weeds and planting of cover crops, such as rye and wheat, to improve soil health and suppress regrowth of weeds.

### SEEDING

The following season, the landscape is seeded with native grasses and wildflowers.

### FIRST GROWING SEASON

Maintenance mowing 3–4 times during the first season of growth trims annual weeds that are taller than the meadow seedlings.

### SECOND GROWING SEASON

By the second season of growth, the meadow has begun to establish. A supplemental planting of native grasses and wildflowers reinforces the process. Maintenance mowing 2–3 times trims weeds that are taller than the established grasses.

### THIRD GROWING SEASON

By the third season, weed pressure is significantly reduced, and the meadow continues to mature with the help of ongoing management.


Support for the Dene Slope restoration project is provided by
**Robert J. Katz and Arline Mann**

Additional support for parkwide improvements and stewardship is provided by:

PAULSON
FAMILY
FOUNDATION


CENTRAL PARK CONSERVANCY
central to the park

NYC Parks









Barrett Doherty




F. L. Olmsted,
Calvert Vaux,






F. L. Olmsted,
Calvert Vaux,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Barrett Doherty








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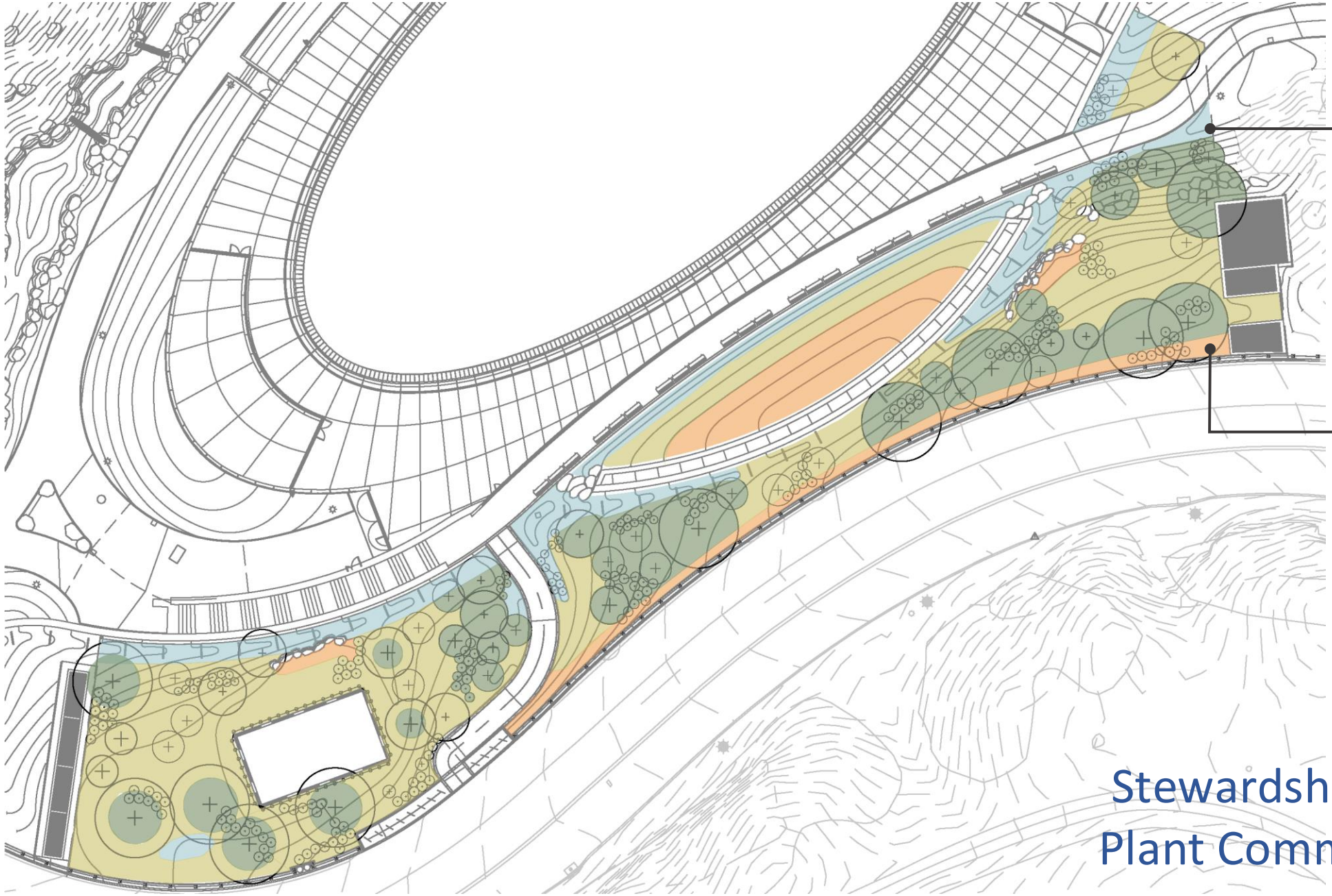
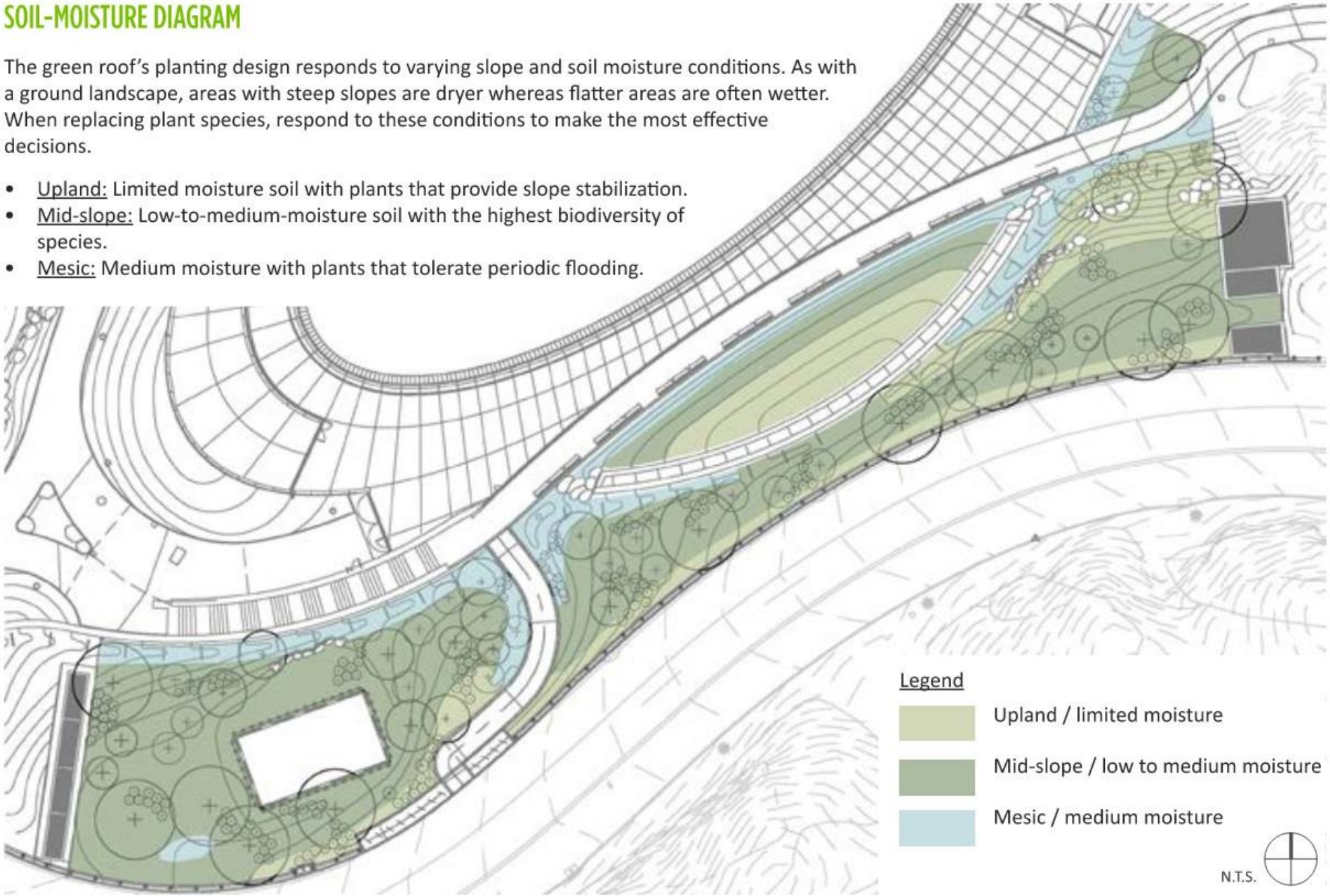



# Stewardship: Predicted Plant Community Zones

# SOIL-MOISTURE DIAGRAM

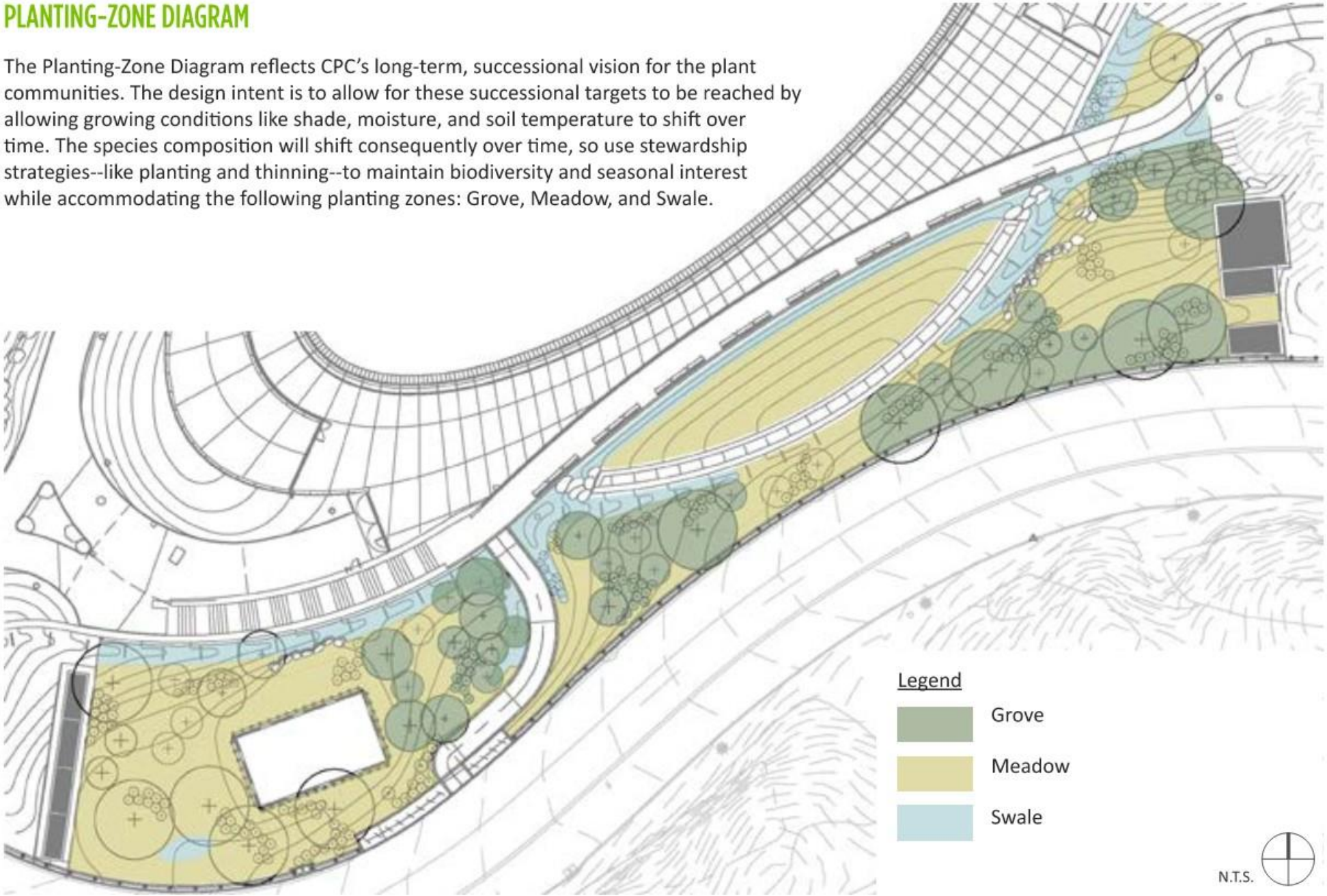
The green roof's planting design responds to varying slope and soil moisture conditions. As with a ground landscape, areas with steep slopes are dryer whereas flatter areas are often wetter. When replacing plant species, respond to these conditions to make the most effective decisions.

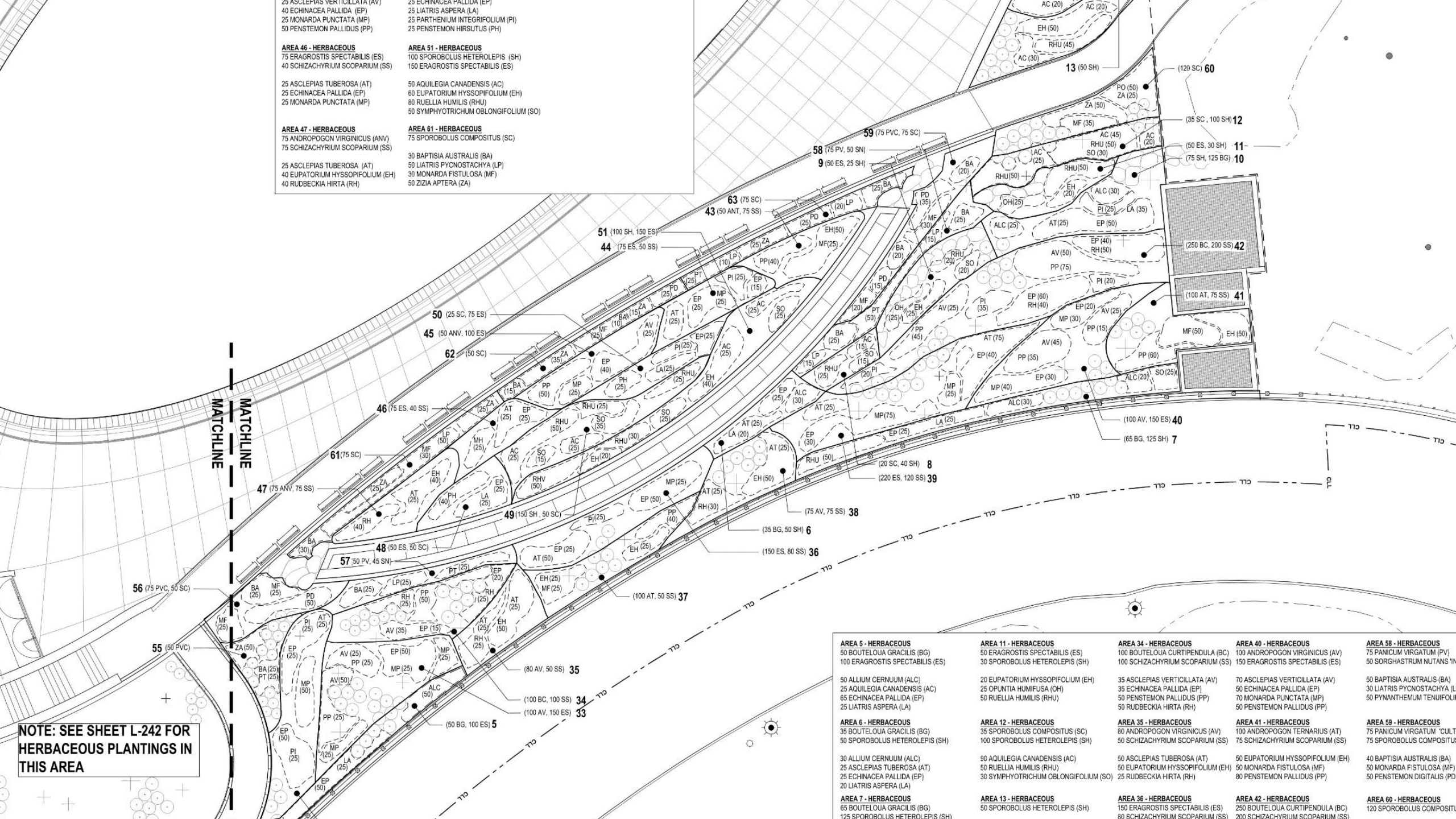
- Upland: Limited moisture soil with plants that provide slope stabilization.
- Mid-slope: Low-to-medium-moisture soil with the highest biodiversity of species.
- Mesic: Medium moisture with plants that tolerate periodic flooding.



# PLANTING-ZONE DIAGRAM

The Planting-Zone Diagram reflects CPC's long-term, successional vision for the plant communities. The design intent is to allow for these successional targets to be reached by allowing growing conditions like shade, moisture, and soil temperature to shift over time. The species composition will shift consequently over time, so use stewardship strategies--like planting and thinning--to maintain biodiversity and seasonal interest while accommodating the following planting zones: Grove, Meadow, and Swale.




MATCHLINE
MATCHLINE
NOTE: SEE SHEET L-242 FOR HERBACEOUS PLANTINGS IN THIS AREA
AREA 46 - HERBACEOUS
75 ERAGROSTIS SPECTABILIS (ES)
40 SCHIZACHYRIUM SCOPARIUM (SS)
25 ASCLEPIAS TUBEROSA (AT)
25 ECHINACEA PALLIDA (EP)
25 MONARDA PUNCTATA (MP)
AREA 47 - HERBACEOUS
75 ANDROPOGON VIRGINICUS (ANV)
75 SCHIZACHYRIUM SCOPARIUM (SS)
25 ASCLEPIAS TUBEROSA (AT)
40 EUPATORIUM HYSSOPIFOLIUM (EH)
40 RUDBECKIA HIRTA (RH)
25 ECHINACEA PALLIDA (EP)
25 LIATRIS ASPERA (LA)
25 PARTHENIUM INTEGRIFOLIUM (PI)
25 PENSTEMON HIRSUTUS (PH)
AREA 51 - HERBACEOUS
100 SPOROBOLUS HETEROLEPIS (SH)
150 ERAGROSTIS SPECTABILIS (ES)
50 AQUILEGIA CANADENSIS (AC)
60 EUPATORIUM HYSSOPIFOLIUM (EH)
80 RUELLIA HUMILIS (RHU)
50 SYMPHYOTRICHUM OBLONGIFOLIUM (SO)
AREA 61 - HERBACEOUS
75 SPOROBOLUS COMPOSITUS (SC)
30 BAPTISIA AUSTRALIS (BA)
50 LIATRIS PYCNOSTACHYA (LP)
30 MONARDA FISTULOSA (MF)
50 ZIZIA APTERA (ZA)
AREA 5 - HERBACEOUS
50 BOUTELOUA GRACILIS (BG)
100 ERAGROSTIS SPECTABILIS (ES)
50 ALLIUM CERNUUM (ALC)
25 AQUILEGIA CANADENSIS (AC)
65 ECHINACEA PALLIDA (EP)
25 LIATRIS ASPERA (LA)
AREA 6 - HERBACEOUS
35 BOUTELOUA GRACILIS (BG)
50 SPOROBOLUS HETEROLEPIS (SH)
30 ALLIUM CERNUUM (ALC)
25 ASCLEPIAS TUBEROSA (AT)
25 ECHINACEA PALLIDA (EP)
20 LIATRIS ASPERA (LA)
AREA 7 - HERBACEOUS
65 BOUTELOUA GRACILIS (BG)
125 SPOROBOLUS HETEROLEPIS (SH)
AREA 11 - HERBACEOUS
50 ERAGROSTIS SPECTABILIS (ES)
30 SPOROBOLUS HETEROLEPIS (SH)
20 EUPATORIUM HYSSOPIFOLIUM (EH)
25 OPUNTIA HUMIFUSA (OH)
50 RUELLIA HUMILIS (RHU)
AREA 12 - HERBACEOUS
35 SPOROBOLUS COMPOSITUS (SC)
100 SPOROBOLUS HETEROLEPIS (SH)
90 AQUILEGIA CANADENSIS (AC)
50 RUELLIA HUMILIS (RHU)
30 SYMPHYOTRICHUM OBLONGIFOLIUM (SO)
AREA 13 - HERBACEOUS
50 SPOROBOLUS HETEROLEPIS (SH)
AREA 34 - HERBACEOUS
100 BOUTELOUA CURTIPENDULA (BC)
100 SCHIZACHYRIUM SCOPARIUM (SS)
35 ASCLEPIAS VERTICILLATA (AV)
35 ECHINACEA PALLIDA (EP)
50 PENSTEMON PALLIDUS (PP)
50 RUDBECKIA HIRTA (RH)
AREA 35 - HERBACEOUS
80 ANDROPOGON VIRGINICUS (AV)
50 SCHIZACHYRIUM SCOPARIUM (SS)
50 ASCLEPIAS TUBEROSA (AT)
50 EUPATORIUM HYSSOPIFOLIUM (EH)
25 RUDBECKIA HIRTA (RH)
AREA 36 - HERBACEOUS
150 ERAGROSTIS SPECTABILIS (ES)
80 SCHIZACHYRIUM SCOPARIUM (SS)
AREA 40 - HERBACEOUS
100 ANDROPOGON VIRGINICUS (AV)
150 ERAGROSTIS SPECTABILIS (ES)
70 ASCLEPIAS VERTICILLATA (AV)
50 ECHINACEA PALLIDA (EP)
70 MONARDA PUNCTATA (MP)
50 PENSTEMON PALLIDUS (PP)
AREA 41 - HERBACEOUS
100 ANDROPOGON TERNARIUS (AT)
75 SCHIZACHYRIUM SCOPARIUM (SS)
50 EUPATORIUM HYSSOPIFOLIUM (EH)
50 MONARDA FISTULOSA (MF)
80 PENSTEMON PALLIDUS (PP)
AREA 42 - HERBACEOUS
250 BOUTELOUA CURTIPENDULA (BC)
200 SCHIZACHYRIUM SCOPARIUM (SS)
AREA 58 - HERBACEOUS
75 PANICUM VIRGATUM (PV)
50 SORGHASTRUM NUTANS 'IN
50 BAPTISIA AUSTRALIS (BA)
30 LIATRIS PYCNOSTACHYA (L
50 PYNANTHEMUM TENUIFOLI
AREA 59 - HERBACEOUS
75 PANICUM VIRGATUM 'CULT
75 SPOROBOLUS COMPOSITU
40 BAPTISIA AUSTRALIS (BA)
50 MONARDA FISTULOSA (MF)
50 PENSTEMON DIGITALIS (PD
AREA 60 - HERBACEOUS
120 SPOROBOLUS COMPOSITU


October, Year 1


August, Year 2





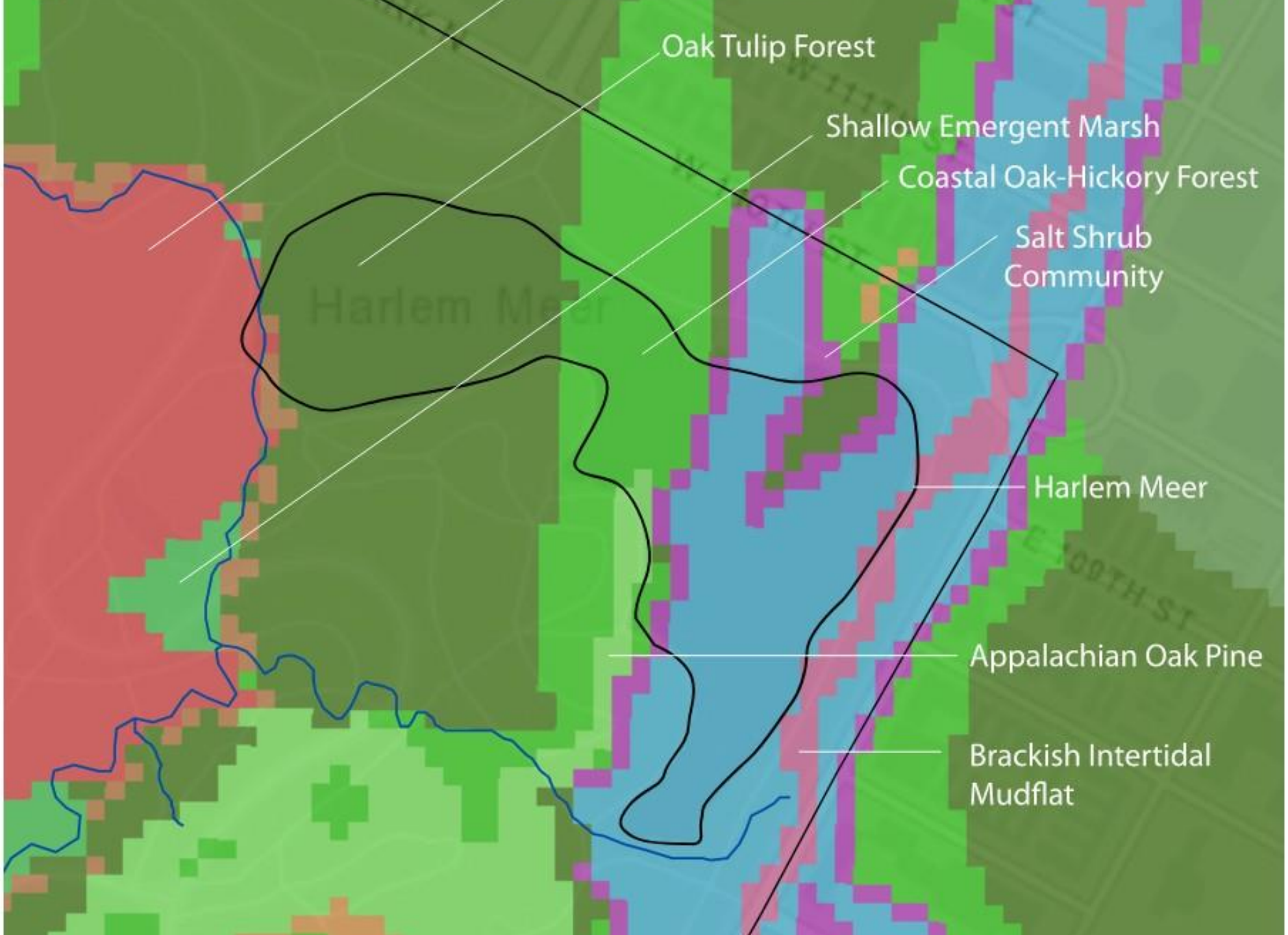

## Content of Manual

- **Understand** the structural components of a green roof and intent of the design
- **Review** stewardship calendars, activities, and plant-id information
- **Operate** under a shared framework for decision making


Plant community development
through succession

# Cutback




Oak Tulip Forest
Shallow Emergent Marsh
Coastal Oak-Hickory Forest
Salt Shrub Community
Harlem Meer
Appalachian Oak Pine
Brackish Intertidal Mudflat

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# Central Park Environmental Sustainability Framework

# Context



## Climate Change

Rising temperatures, fire, wind (blow-downs), flooding, rain events/cloud bursts, drought

Smoke from Canada's wildfires blankets New York, 2023
(Image credit: WABC)



## Park Use

Central Park receives 42 million visits annually.

Sheep Meadow crowds, 2009



## Operational Challenges

Increased pests, diseases, and invasives. Aging infrastructure and utilities.

East Meadow, American Elm, 2016

# Creating the Framework



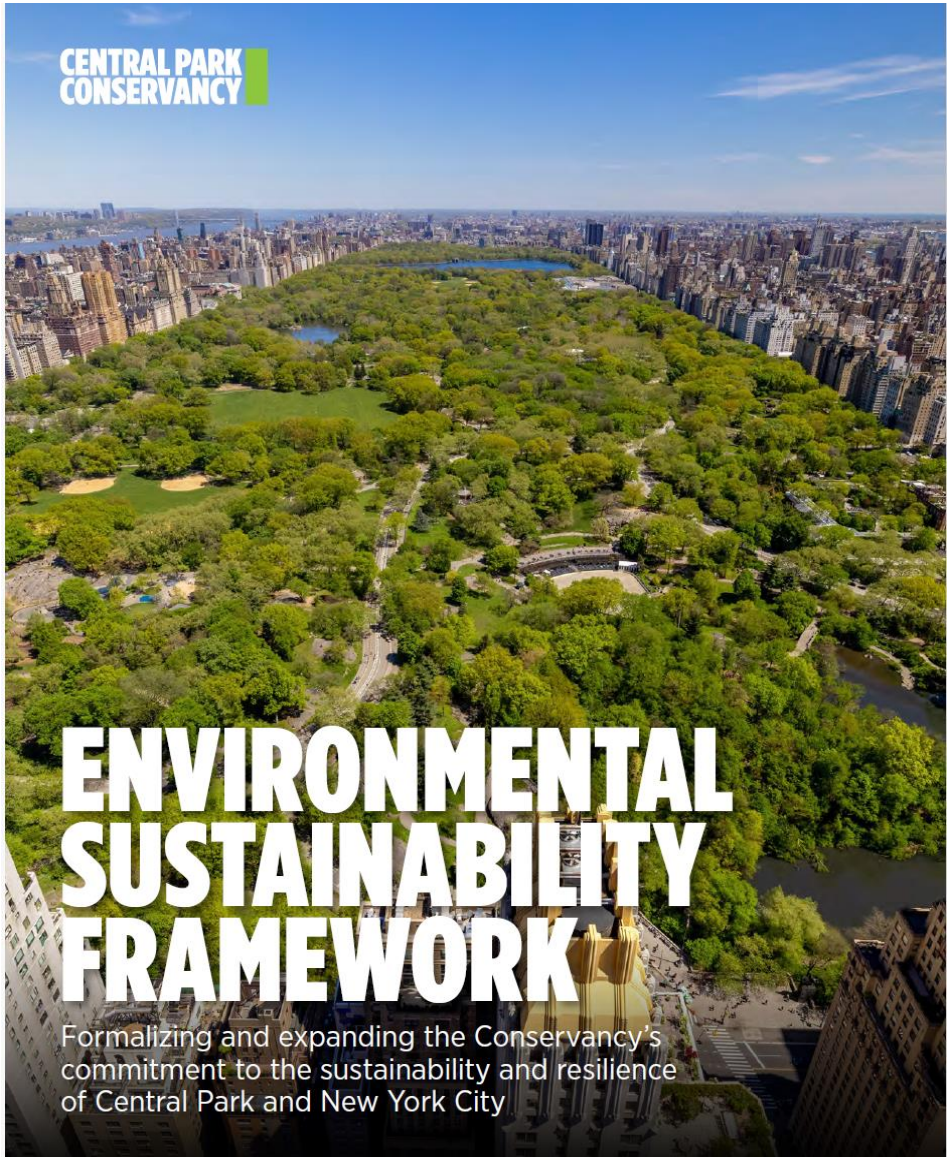


# Peer Review

**A peer review was conducted to align sustainability approach with best practices and identified gaps and opportunities for collective impact.**

**Key partners include:**

- Mayor's Office of Climate & Environmental Justice
- NYC Department of Parks & Recreation
- NYC Department of Environmental Protection
- NY State Department of Environmental Conservation



# Guiding Principles



**Environmental Ambition in a Landmark Park**




**Transparency**



**Stakeholder Engagement**



**Investing in Employees**

# Framework Sections



Capital Projects

- Waste & Resource Recovery
- Water
- Biodiversity & Climate Resilient Landscapes
- Greenhouse Gas Emissions & Energy



Park Operations



# Biodiversity & Climate Resilient Landscapes

# Biodiversity & Climate Resilient Landscapes

## Goals

- **Improve** ecosystem services and biodiversity
- **Develop** a sustainable composition of young and mature trees
- **Increase** carbon storage and sequestration
- **Invest** in comprehensive on-the-job training to support sustainable landscape management



# Biodiversity & Climate Resilient Landscapes

## Recommended Actions

- **Prioritize** native & climate-adaptive species
- **Design** for biodiversity and habitat creation
- **Support** healthy root systems
- **Embed** sustainable stewardship in standard operating procedures and training
- **Balance** tree planting with canopy goals and Park design
- **Boost** carbon storage



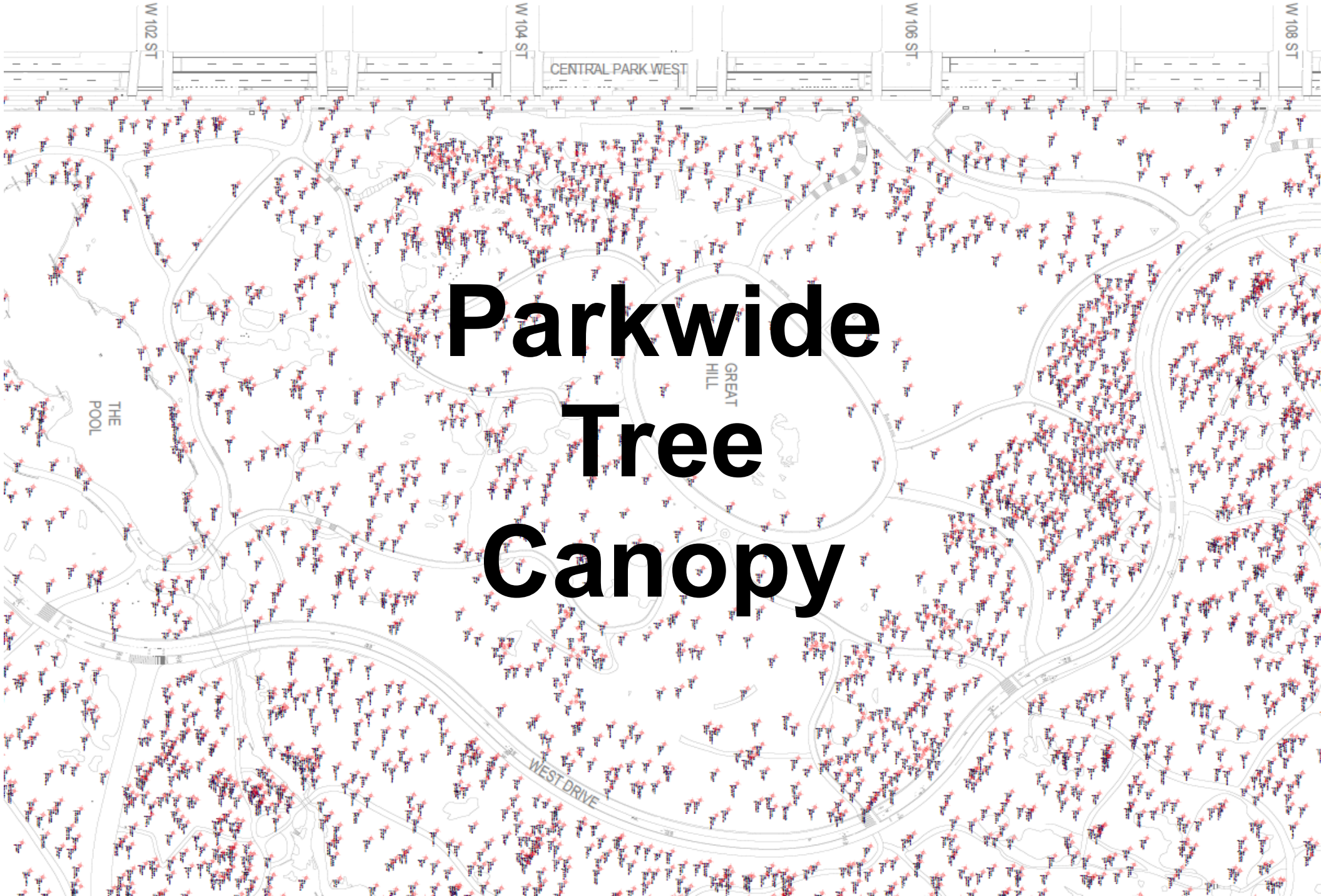


# The Spontaneous Vascular Flora of New York's Central Park

The flora of Central Park was documented through extensive collection of herbarium specimens from 2013 to 2017. The flora consists of 438 species representing 262 genera and 89 families. Native species represent 45% of the flora (198 species), and 54% of the species (240) are nonnative.

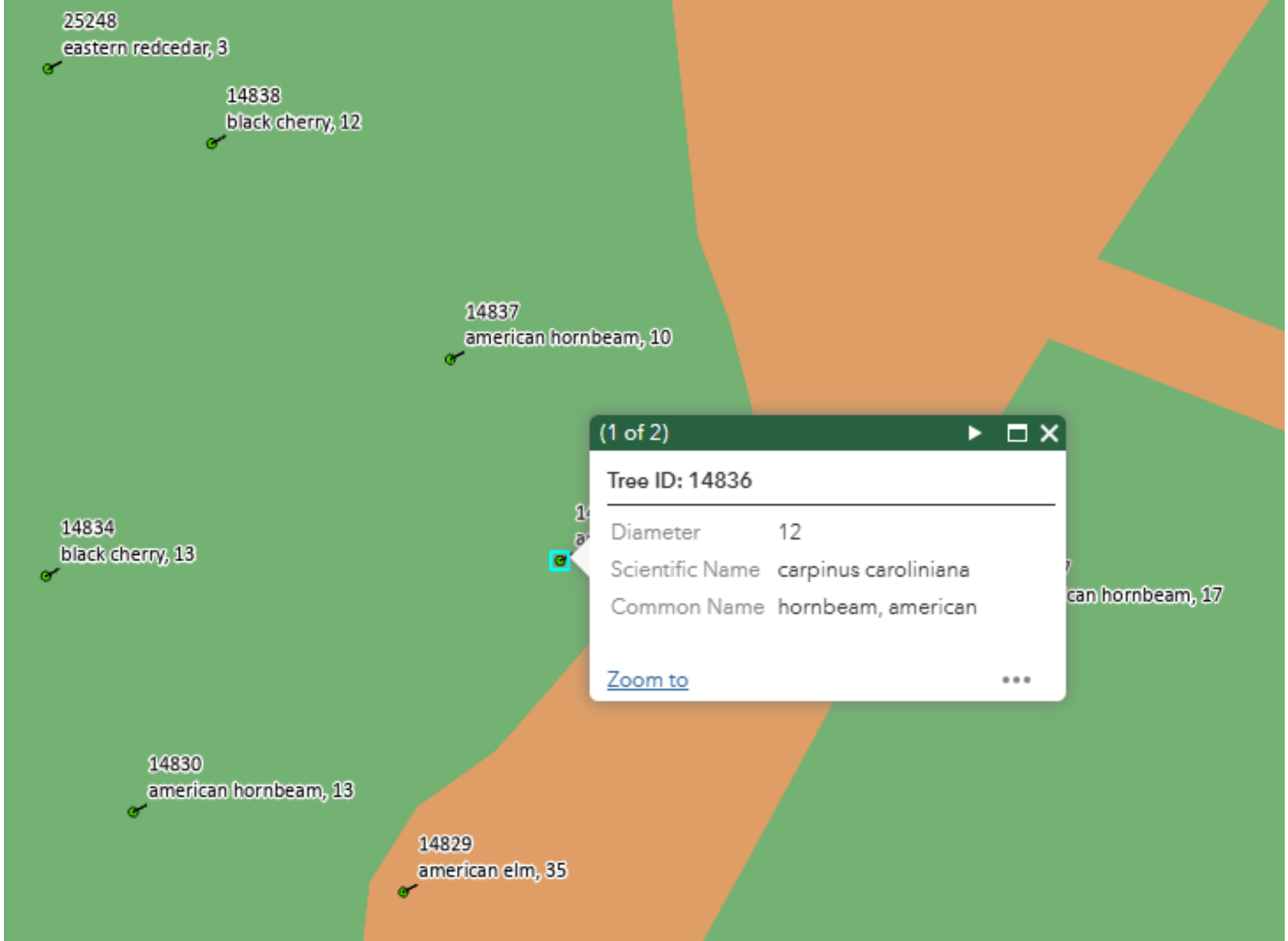
The largest families are Poaceae (56 species), Asteraceae (55), Rosaceae (27), Fabaceae (20), and Polygonaceae (17). The largest genera are *Persicaria* (8 species), *Carex* (7), *Acer* (7), *Cyperus* (6), *Rubus* (6), and *Eragrostis* (6). Seven species are ranked as rare, threatened, or endangered by New York Natural Heritage Program. Thirty-six species are listed as prohibited or regulated invasive species by New York State. All species are vouchered by herbarium specimens and silica-dried tissue samples at The New York Botanical Garden.

*Journal of the Torrey Botanical Society, February, 2020*




# Parkwide Tree Canopy


CENTRAL PARK CONSERVANCY Atlas 2.2
Find address or place
W 105 ST
Central Park West
W 104 ST
Central Park West
Great Hill
19791 american elm, 21
14856, american elm, 12
14855, pin oak, 17
24815, spp. hawthorn, 3
14861 american hornbeam, 13
31433 american elm, 2
19923 pin oak, 14
14854, black cherry, 11
14860 american hornbeam, 19
14857 black cherry, 8
14871 american elm, 30
24813 red maple, 6
28380 pin oak, 8
25251 eastern redcedar, 3
25249 eastern redcedar, 3
25250 eastern redcedar, 3
28379, spp. elm, 6
15016 siberian elm, 21
14849 american hornbeam, 14
24881 american hornbeam, 6
32000 ornamental cherry, 7
14879 american hornbeam, 12
15012 american elm, 31
14845 ornamental cherry, 7
31431 american hophornbeam, 2
14875 american hornbeam, 18
14843 american hornbeam, 7
19925 pin oak, 12
24882 american hornbeam, 6
14883 pin oak, 21
14882 sugar maple, 15
14840 spp. hawthorn, 10
14842 american hornbeam, 11
31353 american elm, 2
31100 spp. elm, 3
32017, corneliancherry dogwood, 8
32018 corneliancherry dogwood 8
14841 american hornbeam, 15
25248 eastern redcedar, 3
14876 siberian elm, 39
14877 american hornbeam, 11
19926 pin oak, 26
14838, black cherry, 12
14837 american hornbeam, 10
25245 flowering crabapple, 2
14878 american elm, 35
15007 american elm, 33
14834 black cherry, 13
14836 american hornbeam, 12
25244 flowering crabapple, 2
14887 american hornbeam, 17
14830 american hornbeam, 13
14829, american elm, 35
19927 pin oak, 27
14994 american hornbeam, 11
15008 american elm, 29
14828 pin oak, 17
24883 american hornbeam, 3
14993 american hornbeam, 10
14892 american hornbeam, 12
14827 black locust, 9
14824 black cherry, 11
14889 london planetree, 26
25246 flowering crabapple, 2
14893 american hornbeam, 11
24893 american hornbeam, 6
14992 london planetree, 28
28492 european hornbeam, 7
19928 pin oak, 26
14825 northern red oak, 9
24890 american hornbeam, 4
28493 european hornbeam, 7
28490 tuliptree, 13
14823, black cherry, 11
15273, black locust, 26
14991, norway maple, 23
24884 american hornbeam, 5
24887
14820 american elm, 11
14896 american hornbeam, 14
28499 european hornbeam, 6
24892 american hornbeam, 5
25048 chestnut oak, 7
28498 pin oak, 10
24885 american hornbeam, 6
24888 american hornbeam, 6
19929 pin oak, 30
14814, black locust, 10
14985 pin oak, 16
14986 pin oak, 16
28526 pin oak, 12
27005 northern red oak, 6
31101 spp. elm, 3
14812 pin oak, 8
24886 american hornbeam, 6
28496, pin oak, 7
28527 pin oak, 7
31354 american elm, 2
14810, english elm, 6
25253
28497 black cherry, 8
14811, black locust, 11
Washington hawthorn, 3
14997 american elm, 44
14809, black locust, 10
25047 chestnut oak, 8
28528
28529 tuliptree, 5
27006 northern red oak, 6
14808, black cherry, 11
tuliptree, 15
25052 shingle oak, 12
19930 pin oak, 22
19796 american elm, 19
14807, black locust, 13
26371 pin oak, 13
25254, shingle oak, 9
14980 black cherry, 9
24899 chestnut oak, 5
14969, american elm, 40
14943, black locust, 18
32024 black cherry, 9
28525, american elm, 10
0 20 40ft
-73.961 40.797 Degrees
POWERED BY esri


25248
eastern redcedar, 3
14838
black cherry, 12
14837
american hornbeam, 10
(1 of 2)
Tree ID: 14836
Diameter 12
Scientific Name carpinus caroliniana
Common Name hornbeam, american
Zoom to
14834
black cherry, 13
can hornbeam, 17
14830
american hornbeam, 13
14829
american elm, 35

| Genus | Count |
|---|---|
| Acer | 2 |
| Aesculus | 3 |
| Ailanthus | 1 |
| Amelanchier | 6 |
| Carpinus | 1 |
| Carya | 2 |
| Celtis | 6 |
| Cercidiphyllum | 4 |
| Cornus | 6 |
| Elaeagnus | 1 |
| Ginkgo | 10 |
| Gleditsia | 2 |
| Hamamelis | 1 |
| Ilex | 11 |
| Juniperus | 5 |
| Larix | 5 |
| Magnolia | 2 |
| Oxydendrum | 1 |
| Pinus | 3 |
| Platanus | 3 |
| Prunus | 3 |
| Quercus | 29 |
| Robinia | 14 |
| Stewartia | 2 |
| Tilia | 1 |
| Ulmus | 16 |
| Total | 140 |




CENTRAL PARK CONSERVANCY

# Strawberry Fields Tree Composition

## Genus

- Amelanchier
- Celtis
- Cornus
- Ginkgo
- Ilex
- Quercus
- Robinia
- Ulmus
- Other (<6 count)

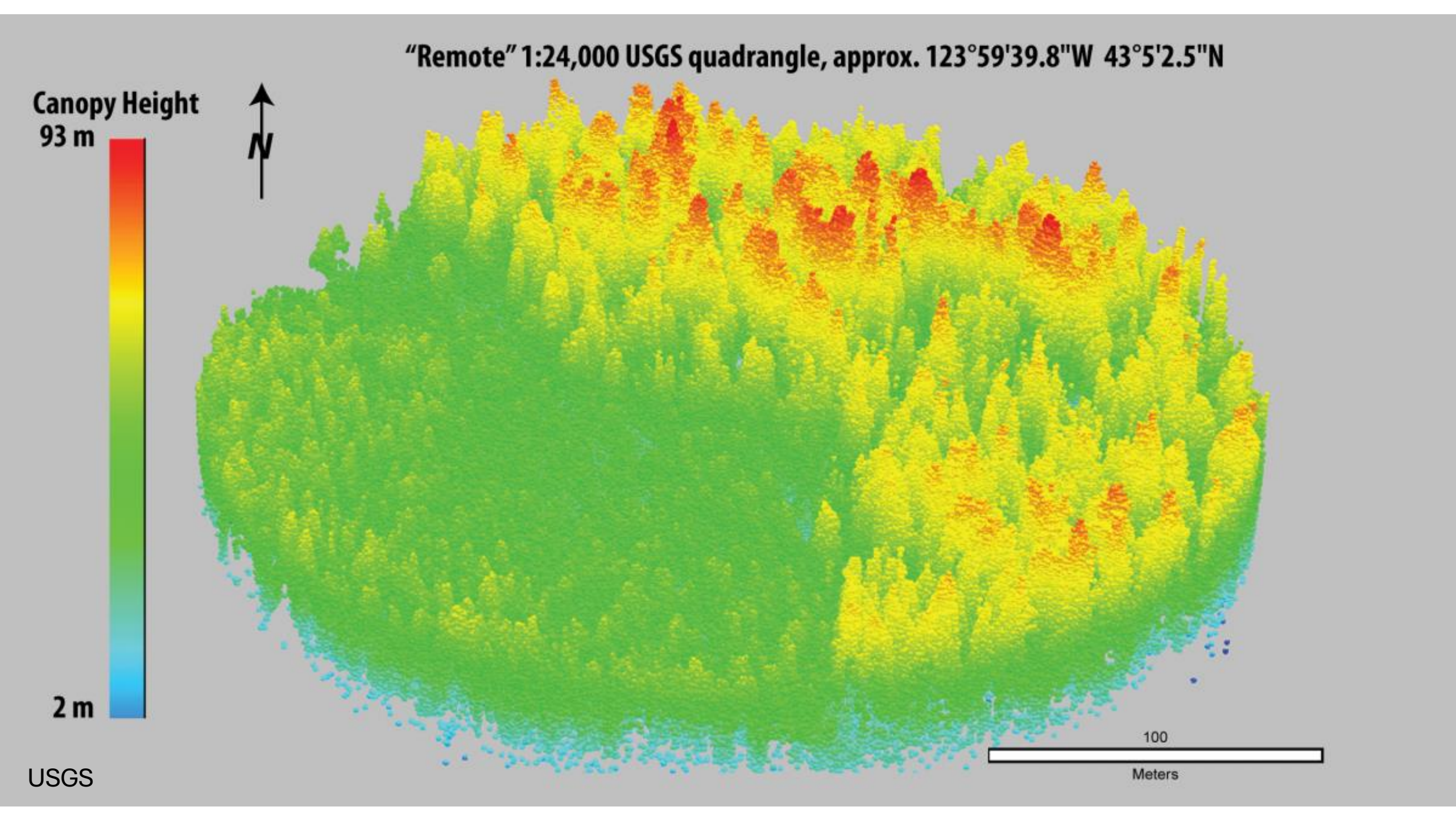
## Relative Age (DBH, inches)

- Young (<8)
- Established (9-17)
- Maturing (18-24)
- Mature (>25)

N

100 Feet

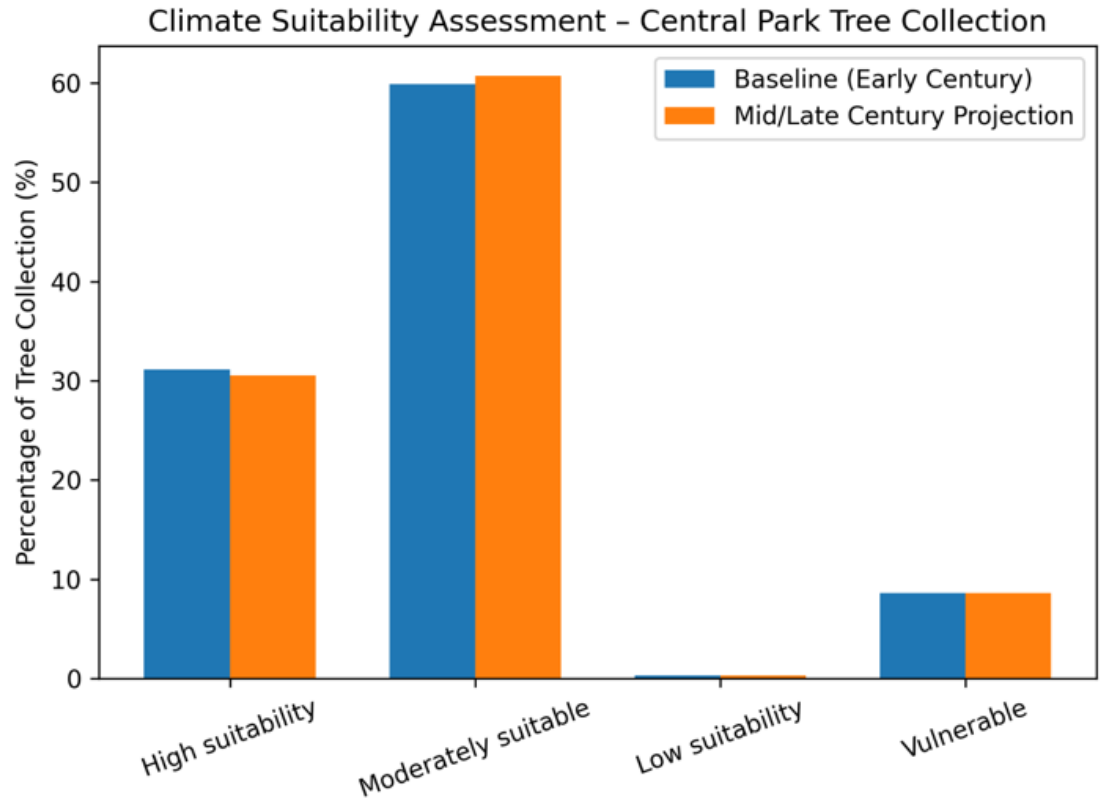
Prepared by CPC Data Systems
Date: 7/1/2026
Source: CPC, NYC DoITT, NYC Parks
Copyright: Central Park Conservancy, 2026


"Remote" 1:24,000 USGS quadrangle, approx. 123°59'39.8"W 43°5'2.5"N
Canopy Height
93 m
2 m
N
100
Meters
USGS

# CLIMATE ASSESSMENT OF TREES OF CENTRAL PARK, NEW YORK

An environmental and ecological assessment of tree health *under current and projected climate conditions.*

Kevin Martin



# Questions?

# Learning objectives

*By the end of this session, you will be able to:*

1. Learn about strategies for embedding ecological and climate considerations in the restoration and management of a historic urban park

2. Find solutions from examples in Central Park that can be applied to other institutions or public spaces

3. Gain ideas for future innovative approaches to climate challenges in the public realm

# Takeaways

1. Consider new strategies for embedding ecological and climate considerations in the restoration and management of your own facility

2. Apply solutions from examples in Central Park to other institutions or public spaces

3. Innovate new approaches to climate challenges in the public realm

# Resources and contact

- Steve Bopp, Studio Director for Planning, Central Park Conservancy - *SBopp@centralparknyc.org*
- Jacob Fiss-Hobart, Project Manager, Central Park Conservancy - *jfisshobart@centralparknyc.org*
- https://www.centralparknyc.org/environmental-sustainability-at-the-central-park-conservancy
- https://s3.amazonaws.com/assets.centralparknyc.org/media/images/EnvironmentalSustainabilityFramework_2025_FINAL.pdf

PHIPPS Duke Farms