

NYBG/125

125TH ANNIVERSARY STRATEGIC PLAN
2016–2021

NEW YORK BOTANICAL GARDEN





125TH ANNIVERSARY STRATEGIC PLAN 2016–2021

INTRODUCTION

Over the past 18 months, The New York Botanical Garden has been engaged in its next in-depth strategic planning process designed to chart the course of action for its future. The current financial health and programmatic vibrancy of NYBG is based, in part, on the deployment of three earlier institution-wide, broad-based plans designed and implemented over the past 20 years. The current plan aims to put in place specific goals to assure institutional strength well beyond 2016, its 125th year.

The planning process is driven by two key groups. The first is the Strategic Planning Steering Committee of the Board, led by Julie Sakellariadis, Vice Chairman for Planning, with oversight from Maureen Chilton, Chairman of the Board, and Lionel Goldfrank III, Chairman of the Executive Committee. The Committee members and their areas of participation are:

Maureen K. Chilton	<i>Endowment</i>
Larry E. Condon	<i>Capital Projects</i>
Robert F. Gossett, Jr.	<i>Community Relations</i>
Henry P. Johnson	<i>Fund for the Garden</i>
Diane Katzin	<i>Business Activities</i>
Edith W. Kean	<i>Community Relations</i>
George M. Milne, Jr., Ph.D.	<i>Science</i>
Marjorie G. Rosen	<i>Horticulture</i>
Deborah Goodrich Royce	<i>Exhibitions</i>
Carmen M. Thain	<i>Continuing Education</i>
Craig Vosburg	<i>Management and Institutional Needs</i>
Caroline A. Wamsler, Ph.D.	<i>Children's Education</i>

The second group is the Expanded Planning Group, chaired by President Gregory Long and Director J.V. Cossaboom. This group is a set of Garden managers and professionals from every level up to the President. These two groups worked together to identify the initiatives that are included in the plan.

As in earlier planning exercises, this process began with staff at Level I, frontline managers and professionals at the operational level in every department, identifying and justifying to their peers the importance of the priorities they saw as crucial to the Garden's future success. Engagement at this broad level ensures that the best thinking in the organization, no matter where it lies, comes to the surface to inform the future. Moving up the table of organization, at Level II, program directors categorized and winnowed these priorities. By Level III, department heads had determined what was both necessary and feasible. Financial planning at Level IV further honed the priorities.

Level V, presented here, is a summary of all priorities established for Board review by the President and the Director. One Level V recommendation is to divide the six-year strategic plan into two three-year phases, each with its program, capital, and financial plan:

Phase I	2016–2018
Phase II	2019–2021

This document published in June 2016 sets forth the resulting program, endowment, and capital plans for both phases, and the financial requirements for Phase I as the template for the 125th Anniversary Fund.



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2016–2021

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125TH ANNIVERSARY PROGRAM PLAN 2016–2021



125TH ANNIVERSARY PROGRAM PLAN 2016–2021

CREATING A GREEN URBAN OASIS

Phase I 2016–2018:

- I. Conservatory Dome and Energy Project: Planning and Design
- II. New Exhibition House: Planning
- III. Adaptive Reuse of the Old Lab and Mosholu Gate Redesign
- IV. Lorillard Stable and Operations Compound: Emergency Repair
- V. A Million Daffodils!
- VI. Fund for Horticulture
- VII. Fund for Trees
- VIII. Infrastructure Renewal—Paving, Lighting, and Stormwater Management
- IX. Horticulture and Operations Equipment
- X. New Tram Fleet

Phase II 2019–2021:

- I. Conservatory Dome and Energy Project: Construction
- II. New Exhibition House: Planning and Design
- III. Adaptive Reuse of the Old Lab and Mosholu Gate Redesign
- IV. Lorillard Stable and Operations Compound: Restoration Planning and Design
- V. A Million Daffodils!
- VI. Fund for Horticulture
- VII. Fund for Trees
- VIII. Infrastructure Renewal—Paving, Lighting, and Stormwater Management
- IX. Horticulture and Operations Equipment
- XI. Restoration of Daylily/Daffodil Walk
- XII. Restoration and Expansion of the Magnolia Collection
- XIII. Restoration of the South Forest
- XIV. Rejuvenation of the Rock Garden

CREATING A GREEN URBAN OASIS

The 250-acre National Historic Landmark landscape that is NYBG, its dramatic topography, and its collections of temperate-zone trees and plants provide a place for city dwellers where the stresses of urban life melt away. It is truly a tonic for the soul. Arranged around a 50-acre, old-growth forest are 50 demonstration gardens and designed collections, interpreted for informal learning and content-rich enjoyment. These outdoor gardens are amplified by the global collections of tropical and desert plants displayed in the great Victorian-style Enid A. Haupt Conservatory. Overall, NYBG visitors depend on this institution for enjoying one of the world's most diverse and best curated exhibitions of plants—a cultural experience in a delightful setting providing New Yorkers with a “day in the country.”

Our Goal Is: To provide a high-quality experience to existing and new audiences by continuing to ensure excellent stewardship of historic buildings, historic landscapes, gardens, living collections, and other facilities, and to further improve them.

To celebrate the 125th Anniversary of NYBG, the following 14 projects have emerged from the strategic planning process as the highest priorities for “Creating a Green Urban Oasis.”

I. **Conservatory Dome and Energy Project**

The restoration of the upper section of the glass dome of the Enid A. Haupt Conservatory is our very highest priority. This magnificent building was restored in the 1990s at a cost of nearly \$30,000,000, but a few elements of complete restoration were beyond the available funding at that time. Most urgent today is the reconstruction of the “compression ring” high in the dome above the Palms of the World Gallery. Other urgent capital needs in the Conservatory at this point include new energy efficient boilers and heating distribution system and a state-of-the-art backup generator system to provide uninterrupted electrical power during emergency situations. The major pieces of equipment now operating in the building have served far beyond their life expectancy.

Phase I 2016–2018: Design and planning of dome restoration and equipment replacement.

Phase II 2019–2021: Construction and completion of dome and equipment replacement.

All of these projects together are estimated to cost \$15,000,000. As of April 30, 2016, \$8,250,000 has been committed. Further government and private funds are being sought.

II. **New Exhibition House**

As special exhibitions continue to be the cornerstone on which NYBG's visitation and earned revenue depend, the need for a venue for flower shows adjacent to the Haupt Conservatory grows. Over the next six years, the Garden will engage in the extensive planning needed to create a new building of this scale and importance.

Phase I 2016–2018: Market research, horticultural planning, business planning, facilities planning, master planning, and preliminary architectural planning at an estimated cost of \$1,000,000.

Phase II 2019–2021: Architectural planning, including conceptual design, design development, and construction drawings at an estimated cost of \$4,000,000.

As of April 30, 2016, \$1,000,000 has been committed for Phase I planning. By the end of Phase II, the Garden will be poised to bid and build this project.

III. **Adaptive Reuse of the Old Lab and Mosholu Gate Redesign**

This former laboratory building, which currently serves as swing space for offices and storage, is located in a prime, high-traffic position near the Mosholu Gate and the LuEsther T. Mertz Library, but it currently serves no strategic function. The Mosholu Gate, an increasingly important entry to the Garden, presents an opportunity to create a more beautiful entry experience that welcomes and orients visitors arriving from the parking garage and train station, while sorting out a complicated mix of pedestrian and vehicular traffic. NYBG will engage in the planning and design necessary to devise and implement the optimal solution. By the end of Phase II, the visitor experience will be significantly improved, with a new entry experience and possible new earned income opportunities.

Phase I 2016–2018: Structural analysis, master planning, business planning, and architectural planning at an estimated cost of \$2,000,000.

Phase II 2019–2021: Architectural design and construction at an estimated cost of \$13,000,000 depending on the final building program.

IV. **Lorillard Stable and Operations Compound**

The Lorillard Stable is a romantic 150-year-old building in the heart of the Garden. A beautiful stone structure where once the Lorillards kept their racing and carriage horses, it is in urgent need of emergency repair. Today it is one of three very old and decrepit buildings that are the headquarters compound for NYBG's Operations Department, including the maintenance staff. Once the Lorillard Stable is stabilized, we will engage in a thorough planning and design process to restore this compound and create a 21st-century facility to house the departments which, on a daily basis, sustain the quality of the Garden's 250 acres and 38 structures.

Phase I 2016–2018: Surveying, planning, and emergency repairs at an estimated cost of \$2,000,000.

Phase II 2019–2021: Planning and design for restoration of the compound at an estimated cost of \$2,000,000.

Restoration construction will follow in subsequent years.

V. **A Million Daffodils!**

This enchanting project is well underway. The first phase, 150,000 bulbs, were planted in fall 2015. This effort, which celebrates the Garden's 125th Anniversary, will extend over the next five years, with fall plantings every year until we have planted one million new bulbs. By spring 2021, they should all be in bloom.

Phase I 2016–2018: Purchase, planting, and horticultural maintenance at an estimated cost of \$300,000.

Phase II 2019–2021: Purchase, planting, and horticultural maintenance at an estimated cost of \$200,000.

As of April 30, 2016, \$150,000 has been committed.

VI. **Fund for Horticulture**

Fundamental to achieving our goal is the ability to sustain this 250-acre museum of plants at the highest possible level over the long term. If we are successful, we will continue to be recognized internationally for the quality of horticulture here. The Fund for Horticulture supports the talented horticultural staff, the plants, and the equipment needed to keep the Garden up to the pristine standards it now enjoys and to improve it even further.

Phase I 2016–2018: Horticulture staff, plants, and equipment at an estimated cost of \$2,000,000.

Phase II 2019–2021: Horticulture staff, plants, and equipment at an estimated cost of \$2,000,000.

The Fund for Horticulture will be part of the Fund for the Garden (formerly the Annual Fund). An opportunity also exists to create endowments for horticulture.

VII. **Fund for Trees**

With the City's largest remaining tract of original forest as well as distinguished, curated collections of specific families of trees, trees are a defining aspect of NYBG. The Fund for Trees is at the root of our ability to curate and sustain the quality of the magnificent trees that make NYBG unique.

Phase I 2016–2018: Horticulture staff, plants, and equipment at an estimated cost of \$2,000,000.

Phase II 2019–2021: Horticulture staff, plants, and equipment at an estimated cost of \$2,000,000.

The Fund for Trees will be part of the Fund for the Garden (formerly the Annual Fund). An opportunity also exists to create endowments for trees.

VIII. **Infrastructure Renewal—Paving, Lighting, and Stormwater Management**

The Garden's many miles of roads and pathways are mostly paved with asphalt, and many of them are more than 70 years old. They are desperately in need of repair and replacement, and this must begin in 2016. In much of the Garden, there is also localized flooding causing runoff into the Bronx River. New stormwater infrastructure systems must be designed and installed to deal with this issue. NYBG now presents more than 100 evening events per year, yet there is no permanent outdoor lighting in the paths connecting the Leon Levy Visitor Center, the Haupt Conservatory, the Mosholu Gate, and Arthur and Janet Ross Lecture Hall. As NYBG expands its activities to serve members and visitors and to generate earned revenue, lighting these pathways is essential.

Phase I 2016–2018: Immediate repairs and replacement needs at an estimated cost of \$1,975,641.

Phase II 2019–2021: Larger system replacement needs at an estimated cost of \$9,800,000.

As of April 30, 2016, \$1,975,000 is in hand. Additional funds will be sought from government sources.

IX. **Horticulture and Operations Equipment Renewal**

This is an ongoing annual need that should be funded inside operating budgets, and has been already included in the fiscal year 2016 budget at the fairly inadequate level of \$100,000, which buys two pieces of equipment. A satisfactory replacement schedule would call for ten pieces of equipment per year. Ninety-five trucks and 10 lawnmowers are required to operate the 250-acre NYBG.

Phase I 2016–2018: Equipment purchases according to the replacement schedule at an annual cost permitted in the budget.

Phase II 2019–2021: Equipment purchases according to the replacement schedule at an annual cost permitted in the budget.

This is a funding need in the Fund for the Garden (formerly the Annual Fund).

X. **New Tram Fleet**

More and more Garden visitors are enjoying the Garden-wide tram tour, which runs continuously on all days and hours the Garden is open, weather permitting. Our trams are powered by compressed natural gas, but they are very old and have been heavily used. The entire fleet of seven trams must be replaced in the period 2016–2018.

Phase I 2016–2018: Replacement of seven trams at an estimated cost of \$1,971,000.

As of April 30, 2016, \$221,000 has been committed. Government funding is being sought for the remainder.

XI. **Restoration of Daylily/Daffodil Walk**

In the height of summer, Daylily/Daffodil Walk is ablaze with the vibrant yellows, oranges, and reds of these easy-to-grow perennial favorites. But this prominent border garden is in need of restoration. New cultivars and heirloom species and a renewed infrastructure will enhance one of the Garden's main thoroughfares.

Phase II 2019–2021: Infrastructure and soil bed replacement and new bulb plantings at an estimated cost of \$200,000.

XII. **Restoration and Expansion of the Magnolia Collection**

This five-acre historic landscape has had minimal care and development in the past two or three generations. It is a high-profile section of the Garden, and a highlight of the all-Garden tram tour, but the collection is in very poor condition and much in need of improvement and expansion. This project will be the eighth large-scale landscape restoration undertaken by NYBG in the past ten years, along with the Benenson Ornamental Conifers, the Azalea Garden, the Arthur and Janet Ross Conifer Arboretum, the Thain Family Forest, the Native Plant Garden, the Burn Family Lilac Collection, and the Steinhardt Maple Collection. The staff of NYBG is truly expert in these projects.

Phase II 2019–2021: Planning, landscape design, and landscape restoration at an estimated cost of \$2,000,000.

A new gift for the Magnolia Collection at the level of \$10,000,000 will be a significant naming opportunity, and will include substantial endowment for its long-term maintenance. Planning work will begin as soon as a major commitment toward this project has been received.

XIII. **Restoration of the South Forest**

This is a 25-acre landscape, south of Stone Mill Road and west of the Bronx River. It is adjacent to the Thain Family Forest and was developed long ago as an exhibition area for several woody plant collections. This landscape is very little managed and parts of it are derelict. However, the trees in this zone are old and magnificent, and the eastern edge of the South Forest is formed by one-quarter mile of Bronx River bank, including a fine canoe portage. As the recent climate change conference in Paris has vigorously pointed out, the restoration and replanting of the world's forests will result in significant mitigation of climate change. This small piece of forest will not make a difference in the mitigation of climate change, but it would provide an opportunity for public education programs, and perhaps an outdoor exhibit to teach Garden visitors the importance of forest rehabilitation in climate change action.

Phase II 2019–2021: Horticultural planning, interpretive planning, landscape design, landscape restoration, and exhibit construction at an estimated cost of \$2,000,000.

At the level of \$10,000,000 this will be an exciting naming opportunity, and, of course, will include substantial endowment for long-term maintenance. Once a commitment is in hand, planning work can begin.

XIV. **Rejuvenation of the Rock Garden**

The Rock Garden was designed and built by T.H. Everett in the 1930s. Described as one of the most beautiful gardens of its kind in the world, this 2.5-acre oasis is a spring jewel, with hundreds of alpine flowers nestled among its gravel beds, rocks and crevices and sweeps of rare and graceful woodland plants sheltered under mature spreading trees. While still beautiful and beautifully gardened, the Rock Garden would benefit from a transformation that would make this intimate spring garden into a year-round destination for people who crave sophisticated plantsmanship and great horticulture.

Phase II 2019–2021: Improvements to pathways, infrastructure, water features, and plantings at an estimated cost of \$2,000,000.

At the \$10,000,000 level, this project offers a significant naming opportunity, with substantial endowment for maintenance and curatorship of this garden.



125TH ANNIVERSARY PROGRAM PLAN 2016–2021

CONNECTING GARDENING TO THE ARTS AND HUMANITIES

Phase I 2016–2018:

- I. Expansion of the *Holiday Train Show*®
- II. Major Exhibitions for Spring–Fall 2016–2018
- III. LuEsther T. Mertz Library Archives
- IV. The Humanities Institute
- V. New Center for Continuing Education
- VI. New Curriculum for the Adult Education Program

Phase II 2019–2021:

- II. Major Exhibitions for Spring–Fall 2019–2021
- III. LuEsther T. Mertz Library Archives
- IV. The Humanities Institute
- V. New Center for Continuing Education

CONNECTING GARDENING TO THE ARTS AND HUMANITIES

Gardening throughout the ages has been closely related to scientific exploration and innovation, the visual arts, architecture, and cultural and aesthetic movements. NYBG has always offered hundreds of courses and lectures each year for adult learners interested in diverse subjects related to plants. And more recently, through the development of pioneering interdisciplinary, multimedia exhibitions of plants, books and manuscripts, and works of art, NYBG exhibitions have explored subjects such as the connections between Charles Darwin's scientific thinking and his English country garden and the relationships among Emily Dickinson's interest in plants, her Massachusetts garden, and her poetry. Exhibitions combining original works of art and horticultural displays have also explored, for example, Claude Monet's passion for his garden at Giverny and its inspiration for his art; ideas about Mexican nationalism that informed Frida Kahlo's gardening and her painting; and the close harmony between landscape and the sculpture of Henry Moore.

As is the case with all modern-day museums, a major portion of the Garden's audience comes for these special exhibitions. The earned income programs of institutions such as ours depend on a robust special exhibition program, which is both an educational and a business activity.

While fundamentally a science-based repository, the LuEsther T. Mertz Library of NYBG, now the world's preeminent Library about plants, is also the home of millions of books, manuscripts, and sheet materials documenting the history of science, garden design, urban planning, the history of the uses of plants, the story of garden writing, etc.—all humanities subjects. The Library is an important center for humanities scholarship, and has been recognized by the National Endowment for the Humanities through many significant grants in recent years.

Our Goal Is: To attract significant new audiences; to create engaging content for new and existing audiences; and to make the educational and professional development programs for adults more useful, effective, and financially viable.

To celebrate the 125th Anniversary of NYBG, the following six projects have emerged from the strategic planning process as the highest priorities for “Connecting Gardening to the Arts and Humanities.”

I. **Expansion of the *Holiday Train Show*[®]**

The year 2016 will mark the 25th Anniversary of this New York tradition, for a generation a signature offering of The New York Botanical Garden. The *Holiday Train Show*[®] takes place in the Haupt Conservatory, a glasshouse designed in the late 19th century for perhaps 100 to 300 visitors per day. The size and configuration of the Conservatory have curtailed the growth of the exhibition, and we have learned that the Conservatory itself has a capacity of no more than 6,500 visitors per day. In the past year, NYBG staff has worked diligently with outside exhibition consultants and designers to expand the footprint of the exhibition and change the traffic patterns through the building. The expanded show opened in late 2015 in a glass tent erected adjacent to the Conservatory with 3,000 square feet of additional exhibition space capable of handling approximately 9,000 visitors per day.

Phase I 2016–2018: The “new” *Holiday Train Show*, budgeted within the Garden's operating budget for fiscal year 2016 at a cost of \$750,000 and funded by net revenue from special exhibitions such as *FRIDA KAHLO: Art, Garden, Life*, and the *Holiday Train Show* itself.

II. Major Exhibitions for Spring–Fall

The New York Botanical Garden is already internationally recognized for its exhibition program. Always horticulturally based, these exhibitions provide new perspectives on gardening and its relationship to the arts and humanities. They give reasons for audiences to visit again and again, and provide the focus of the marketing that drives the audiences on which our financial plan depends. It requires about 30 months to develop, fund, install, and market these exhibitions. Each show is expected to attract audiences ranging from 250,000 to 550,000. Summer 2016 brings *Impressionism: American Gardens on Canvas* featuring 20 American Impressionist paintings in the Mertz Library's William D. Rondina and Giovanni Foroni LoFaro Gallery, a major flower show in the Haupt Conservatory, and attendant public programs, including Wynton Marsalis and his orchestra in a 125th Anniversary Concert. In 2017 *CHIHULY* will display approximately 30 major works of art installed outdoors and in the Haupt Conservatory, a show of Dale Chihuly's paintings in the Rondina and LoFaro Gallery, as well as public programming. Major exhibitions with art curated by distinguished curators, horticultural displays that are inspired by the art, and public programs that enhance the cultural themes of the exhibit will follow in each year of the plan.

Phase I 2016–2018: 2016 *Impressionism: American Gardens on Canvas* at an estimated cost for exhibitions and programming of approximately \$2,000,000. More than \$800,000 has been raised to date from various sources, including the National Endowment for the Humanities and private donors.

2017 *CHIHULY* at an estimated project cost of approximately \$4,500,000. Fundraising is underway.

2018 A major art exhibition, flower show, and public programs with costs expected to range from \$2,000,000 to \$3,000,000, to be met with a combination of earned revenue, corporate sponsorship, foundation support, and government grants.

Phase II 2019–2021: Major flower shows and art exhibitions each year with public programs at an estimated annual cost ranging from \$2,000,000 to \$3,000,000. Costs are expected to be met with a combination of earned revenue, corporate sponsorship, foundation support, and government grants.

III. LuEsther T. Mertz Library Archives

The Mertz Library is the repository of the personal papers of botanists, horticulturists, and landscape designers associated with the history of botany and horticulture in the U.S. It also contains the historical records of selected botanical and horticultural organizations, plant societies, and plant-related business and industry. It holds the institutional records of The New York Botanical Garden, which document the growth and evolution of the Garden and its work. With more than one mile (11 million items) of correspondence, manuscripts, research notes, and other materials, these archives are some of the most important primary sources for scholars studying these subjects. While much of this archival material is indexed in some way, a significant portion remains uncataloged and therefore inaccessible to scholars.

Phase I 2016–2018: Processing and cataloging of archival material at an estimated cost of \$500,000 as part of the Fund for the Garden.

Phase II 2019–2021: Processing and cataloging of archival material at an estimated cost of \$500,000 as part of the Fund for the Garden.

IV. **The Humanities Institute**

The purpose of the Institute is to form an intellectual community of students, visiting scholars, and graduate fellows, whose research involves innovative, interdisciplinary approaches to areas of landscape and garden design, urbanism, ecology, art, architecture, and cultural history. The Institute has positioned NYBG at the center of these academic worlds. Scholars and fellows are given complete access to the collections of the Mertz Library and William and Lynda Steere Herbarium. The program consists of year-long Mellon Fellowships for pre- and post-doctoral researchers from around the world interested in a broad range of disciplines, short-term residencies for established scholars seeking to advance their research in new directions, summer-time junior fellowships for emerging scholars to be exposed to this lively humanities research forum, and public programs on a diverse range of environmental humanities topics.

Phase I 2016–2018: The full range of Humanities Institute programming at an estimated cost of \$900,000.

Phase II 2019–2021: Year-long fellowships, short-term residencies, junior fellowships, and public programs at an estimated cost of \$900,000.

Full funding from The Andrew W. Mellon Foundation has been received to operate this program for the period 2016–2018. This program will require restricted funding.

V. **New Center for Continuing Education**

In NYBG strategic planning, the creation of an identifiable, unified, well-equipped Center for Continuing Education has emerged as a high priority. Recent audience surveys indicate that the Adult Education Program's eight classrooms rank last in motivating enrollment in our courses. Transforming an undistinguished and confusing facility into a welcoming and cohesive destination that imparts a sense of place will reflect NYBG's quality and prestige and could pay off in increased enrollments. A first floor Adult Education reception desk in the Watson Building lobby, with a small student lounge area, would welcome students. A glass-enclosed stairwell in the lobby would unify the first and third floors and lead to the eight refurbished classrooms of the Center for Continuing Education. The addition of a 100-seat lecture hall with excellent AV technology would add a much-needed presentation venue for the entire Garden.

Phase I 2016–2018: Business planning, initial design planning, some up-front capital improvements, and consulting relationships with structural engineers and architects at an estimated cost of \$1,500,000.

Phase II 2019–2021: Formal architectural design for the adaptive reuse of the Watson Building and classroom upgrades at an estimated cost of \$1,000,000.

Gut renovation and construction will take place in the years beyond Phase II.

VI. **New Curriculum for the Adult Education Program**

To re-energize and modernize this curriculum, we plan to add two new Certificate programs to our current roster: an Ecological Garden Design Certificate, which would take advantage of the Garden as an ideal teaching venue for exploring ecological principles in horticulture; and a Northeast Naturalist Certificate to replace our current Botany Certificate. Other improvements in Adult Education will include more career guidance and online resources for current students and alumni.

Phase I 2016–2018: Curricular improvements to be funded by new revenue earned by the Adult Education Program.





125TH ANNIVERSARY PROGRAM PLAN 2016–2021

TEACHING SCIENCE TO CITY KIDS

Phase I 2016–2018:

- I. Everett Children's Adventure Garden Restoration: Design and Construction
- II. The Edible Academy Opening in 2018
- III. New Teen Internship Program in the Edible Academy
- IV. Classroom Renovation for Professional Development Program
- V. New Partnerships in Nutrition Education
- VI. Joint Degree Program for New York State Science Teacher Certification

Phase II 2019–2021:

- V. New Partnerships in Nutrition Education
- VI. Joint Degree Program for New York State Science Teacher Certification
- VII. GreenSchool Renovation
- VIII. Field and Citizen Science Programs
- IX. Out-of-School Time Program for Teens
- X. Professional Development Beyond the Tri-State Area

TEACHING SCIENCE TO CITY KIDS

On a local level, New York City teachers, schoolchildren, and families depend upon NYBG for authoritative, hands-on, curriculum-related teaching in the life sciences. Content includes plant biology and ecology, conservation, organic gardening, vegetarian cooking, and healthful eating. Student internships for young people are offered in the Everett Children's Adventure Garden, the Ruth Rea Howell Family Garden, and in many NYBG scientific facilities, including the molecular systematics and plant genomics laboratories.

Serving 300,000 visitors, 90,000 students, and 3,000 teachers annually, this is the most extensive program of children's and family education in any of the world's botanical gardens. For almost a century, NYBG has been a pioneer in this field, and its teaching facilities set standards for institutions across America and the globe. Today its six indoor classrooms, supplemented by the 12-acre Children's Adventure Garden, the Haupt Conservatory, and the 1.5-acre Edible Academy, while standard-setting, are woefully inadequate for a year-round program that continues to grow.

Our Goal Is: To deepen and expand the Garden's reach to K–12 schoolchildren, families, and teachers through programs that inspire children to learn and do science, explore nature, grow and eat more vegetables, and love and advocate for the plant kingdom.

To celebrate the 125th Anniversary of NYBG, the following ten projects have emerged from the strategic planning process as the highest priorities for "Teaching Science to City Kids."

I. **Everett Children's Adventure Garden Restoration: Design and Construction**

Having hosted 4,000,000 visitors since 1998, the Everett Children's Adventure Garden (ECAG) will undergo its first major restoration in its 20-year history. Improvements to the landscape, exhibitry, pathways, and buildings will enable ECAG to better accommodate the wide variety of audiences—families, school groups, teachers, and teens—and the increasing number of visitors it serves, while also ensuring that it remains in the forefront of current science education pedagogy, specifically regarding STEM education and nature play.

Phase I 2016–2018: Design and construction at an estimated cost of \$4,899,000.

All funds are in place.

II. **The Edible Academy Opening in 2018**

This flagship project in Children's Education will position NYBG as the leader in edible gardening education for all New York City children and an international leader in the field. With the opening of the new state-of-the-art building and revitalized campus in 2018, NYBG will be able to double the number of people it serves with its gardening education programs from 50,000 to 100,000 and expand Family Garden programming from seasonal to year-round.

Phase I 2016–2018: Construction and endowment at total cost of \$25,650,000.

As of April 30, 2016, \$21,524,331 is already pledged. The remainder will need to be raised before the groundbreaking in late 2016.

III. **New Teen Internship Program in the Edible Academy**

The Edible Academy will be the site of a new multiyear, tiered program for New York City teens that is modeled on the Explainers Program in ECAG. Not only will participants help to further the horticultural and educational goals of the Edible Academy by working with visitors and mentoring younger gardeners, they will also gain pedagogical skills, job skills, self-esteem, and confidence.

Phase I 2016–2018: Curriculum development and program implementation at an estimated cost of \$75,000 per year.

IV. **Classroom Renovation for Professional Development Program**

NYBG proposes to renovate one of its existing classrooms in the Watson Building, creating a dedicated space for teacher education that is equipped with 21st-century technology capabilities, including Smart Boards and mobile access, and resources for growing plants and other scientific experiments.

Phase I 2016–2018: Technology upgrades, Smart Boards, improved furnishing, and plant growing capabilities at an estimated cost of \$150,000.

Restoration construction will follow in subsequent years.

V. **New Partnerships in Nutrition Education**

The Garden will pursue partnerships with local colleges and universities that are respected in the fields of nutrition education and food studies such as Teachers College and New York University. These collaborations would allow the Garden to incorporate well-tested nutrition-based curricula into its existing school, teacher, and family programs, and benefit the academic institutions by enabling them to infuse garden-based education into their coursework.

Phase I 2016–2018: Partnership formation, program development, and beta testing at an estimated cost of \$400,000.

Phase II 2019–2021: Program implementation at an estimated cost of \$550,000.

VI. **Joint Degree Program for New York State Science Teacher Certification**

With the backing of the New York City Schools Chancellor, NYBG and an academic partner such as CUNY-Lehman will develop a joint degree program in science education that leads to certification of their pre-service teacher education students.

Phase I 2016–2018: Partnership formation, program development, and program approval.

Phase II 2019–2021: Program implementation.

It is hoped that current staff of the Children's Education Department can accomplish this with no additional funding.

VII. **GreenSchool Renovation**

Located in the basement of the Haupt Conservatory, the GreenSchool classroom is woefully inadequate to meet the needs of 21st-century science teachers. The proposed renovation would provide a state-of-the-art teaching facility, with close and seamless access to the Conservatory and exhibit spaces for plant observation and cross-disciplinary workshops. Improvements would include modern teaching technology (such as Smart Boards), plant growing capabilities, and laboratory equipment to enable authentic STEM workshops. Moveable classroom walls and glass partitions would create a flexible, multifunctional classroom, training, and discovery space.

Phase II 2019–2021: Renovation and installation of new technology, plant growing capabilities, and laboratory equipment at an estimated cost of \$1,500,000.

VIII. **Field and Citizen Science Programs**

To enhance real-life science programs, we propose creating a comprehensive school program that allows more students to do authentic research and data collection, such as monitoring seasonal change, water quality, or even the migration patterns of birds. These programs will give students a better understanding of the scientific process. But more importantly, they will connect science to real-life environmental issues such as climate change and water pollution, making science concrete in students' lives.

Phase II 2019–2021: Program development and implementation. This program will be funded through program fees and grants as part of the Fund for the Garden.

IX. Out-of-School Time Program for Teens

To successfully get 6–12th grade students to understand that science is not just another school subject, we need to tether real-life science learning to out-of-school time. The Children's Education Department will bring the full panoply of the Garden's resources to bear on providing authentic science, gardening, and career readiness experiences to teens. In NYBG classrooms, gardens, forest, or along the river, out-of-school programs provide students the time and places to actually practice science. The Garden's staff and multidisciplinary exhibits provide opportunities to explore various careers. These authentic experiences are rare, especially for underrepresented students in the Bronx.

Phase II 2019–2021: Program development and implementation at an estimated cost of \$100,000 per year. Restricted funding will be sought.

X. Professional Development Beyond the Tri-State Area

In response to inquiries from teachers around the country, NYBG will explore online learning blended with face-to-face teaching to expand its educational reach. Inspired by the experience of colleagues at The Metropolitan Museum of Art, where comparison of virtual images with real art objects shows a strong effect for demonstrating the value of real-life museum experiences for teachers and their students, we will explore this same approach with the living works of art—the gardens—scattered throughout our 250-acre canvas. This approach is intended to provide new materials and innovative pedagogy to teachers throughout the nation.

Phase II 2019–2021: Program development, technological infrastructure, and program implementation.

This program will be instituted only when dedicated funding is identified. Government funding will be sought to establish the program.





125TH ANNIVERSARY PROGRAM PLAN 2016–2021

SAVING THE PLANTS OF THE WORLD

Phase I 2016–2018

Phase II 2019–2021

- I. NYBG Identified Areas of Botanical Concern (“ABCs”) for Biodiversity Research and Science-Based Conservation
 - A. Conservation in the Atlantic Coastal Forest of Brazil
 - B. Forests of the Amazon
 - C. Forests and Palms of Southeast Asia
 - D. Biocultural Diversity in the South Pacific
 - E. Plant Biodiversity and Regional Coordination in the Caribbean
 - F. EcoFlora of New York City
- II. Institutional Projects and Programs
 - A. William and Lynda Steere Herbarium
 - Plants of the Americas Project
 - World Flora Online Project
 - B. LuEsther T. Mertz Library
 - C. Cullman Program for Molecular Systematics
 - D. Center for Conservation Strategy
 - EcoFlora of New York City
 - Conservation Assessments in the Plants of the Americas Project
 - Small Grants Program
 - Forum for Conservation Action
 - Annual Conservation Symposium
 - E. Center for Tropical Exploration
 - F. Graduate Training Center
 - G. NYBG Press
- III. New Tools
 - A. Geographic Information Systems
 - B. Digital Asset Management System

Note: Because these are ongoing projects, we are not distinguishing between Phase I and Phase II. The estimated costs of each phase are outlined in the text that follows.

SAVING THE PLANTS OF THE WORLD

Despite several hundred years of study, there is still a lot we do not understand about plants and fungi, but we know that they are under threat from expanding human population, invasive species, and climate change. There is not a moment to lose in trying to understand and mitigate those threats to species and their habitats. With advances in cutting-edge botanical research and the remarkable resources we have built over the past 125 years—the 7.8 million specimens documenting plant biodiversity in the William and Lynda Steere Herbarium, our unrivaled one million-item LuEsther T. Mertz Library, the millions of digitized images and plant records of the C.V. Starr Virtual Herbarium, our growing ability to understand the botanical world at the molecular level through the Lewis B. and Dorothy Cullman Program for Molecular Systematics, and most importantly, the expertise and global relationships of our 80 Ph.D. plant scientists—NYBG has all the capabilities to expand its leadership role in the fight to save the plants of the world.

Our Goal Is: To continue to fill the very large gaps in biodiversity knowledge while promoting science-based solutions for conserving and sustaining biodiversity in partnership with local people; to continue to be leaders in botanical research; and to extend our role by training the next generation of botanists for science and the benefit of all society.

To celebrate the 125th Anniversary of NYBG, the following initiatives have been identified for focus in the period 2016–2021.

I. **NYBG Identified Areas of Botanical Concern (“ABCs”) for Biodiversity Research and Science-Based Conservation**

This set of projects represents the continuation of NYBG research and conservation initiatives that have been on-going for decades. They reflect a commitment to on-the-ground engagement with important places for biodiversity and the people who live in them. They combine research to discover what is still there before it becomes extinct, capacity-building to help local people understand, value, and manage their own natural resources sustainably, and generation of the data and tools necessary for effective protection of biodiversity in these areas.

A. **Conservation in the Atlantic Coastal Forest of Brazil**

The Atlantic Coastal Forest of Brazil is one of the world's biodiversity “hotspots,” with high species diversity and endemism (species found only in this geographic area), and devastating rates of deforestation. Less than 5% of the original forest remains. With support from the National Science Foundation (NSF) and private sources, NYBG scientists have worked there for decades, in collaboration with Brazilian scientists and community members.

Impacts by 2021:

- Strengthening and expansion of existing protected areas.
- Creation of the world's most sophisticated computer model of biodiversity in this region using NYBG data.
- Identification of priority areas for protection using this model, and, working with the Brazilian government and other conservation organizations, creation of several new protected areas.

Phase I 2016–2018: Research and science-based conservation in the Atlantic coastal forest of Brazil at an estimated cost of \$300,000, in addition to earlier funding.

Phase II 2019–2021: Research and science-based conservation in the Atlantic coastal forest of Brazil at an estimated cost of \$300,000, in addition to NSF funding.

B. Forests of the Amazon

The rain forests of the Amazon basin are the most diverse in the world, holding 10% of the world's known species. To date, 17% of this ecosystem has been lost, and although deforestation rates have decreased, the rain forest is still shrinking, leading to biodiversity loss and increases in global warming. NYBG has conducted research in the region for decades and is the only botanical organization with a formal advisory role with the Forest Service in Brazil, where we work together toward the protection and sustainable management of Amazonian forests.

Impacts by 2021:

- 200 woodsmen with skills and resources to conduct valid forest inventories, the baseline for managing and monitoring forest use, through NYBG's work with the Forest Service and Brazilian vocational schools.
- Publication of the first-ever catalog of flora for the State of Rondônia, which comprises a significant part of Amazonia's biodiversity.

Phase I 2016–2018: Research and capacity-building activities in the forests of the Amazon at an estimated cost \$300,000 in private support, in addition to National Science Foundation funding.

Phase II 2019–2021: Research and capacity-building activities in the forests of the Amazon at an estimated cost \$300,000 in private support, in addition to National Science Foundation funding.

C. Forests and Palms of Southeast Asia

The forests of Southeast Asia are some of the least known scientifically on the planet. The Garden is taking a lead in research of these unexplored ecosystems, including in Myanmar, Vietnam, Laos, and Cambodia. In Myanmar, where half of the remaining Asian rain forest is located, NYBG's team of systematists and forest ecologists collect scientific data and use it to inform community-based conservation in various areas of the country. In addition, the Garden is applying this research to conservation and sustainable management of forest resources, such as rattan and medicinal plants, while empowering local people to legally use their own resources sustainably, as they have for hundreds of years.

Impacts by 2021:

- Declaration of Myanmar's Northern Forest Complex as a UNESCO World Heritage Site, based in part on NYBG detailed plant inventories.
- 18 local indigenous communities with legal community forestry permits to use forest resources located in the buffer zone of a protected area, creating a new model for community-based conservation in Myanmar.
- Six years of data on forest growth rates and carbon sequestration capacity from hundreds of banded trees to inform sound sustainable forest management and help ameliorate global warming.

Phase I 2016–2018: Research, community conservation, and sustainable forestry management at an estimated cost of \$500,000 in additional funding.

Phase II 2019–2021: Research, community conservation, and sustainable forestry management at an estimated cost of \$500,000 in additional funding.

Funding will be sought from the National Science Foundation and private donors.

D. Biocultural Diversity in the South Pacific

Scientists in NYBG's Institute of Economic Botany are working on the Pacific islands of Palau and Vanuatu to conserve biocultural diversity through research in systematics, ethnobotany, and traditional plant-based health care. Based on the model that NYBG has carried out famously and successfully in other parts of the tropical world, they are preparing publications on plant diversity, distribution, utilization, and conservation for these Pacific islands, and building local capacity to sustainably manage these resources and improve primary health care.

Impacts by 2021:

- Vanuatu Forestry Department Herbarium upgraded to world-class standards, including training of new curatorial staff to operate this facility.
- At least five additional community-managed conservation areas in Southern Vanuatu.
- Published book on biocultural plant diversity on Tanna Island, including documenting plant names in one of the most language-dense areas of the world.
- A definitive book documenting the plants, people, and culture of Palau.

Phase I 2016–2018: Research in systematics, ethnobotany, and traditional plant-based health care; capacity-building; and sustainable management in the South Pacific region at an estimated cost of \$300,000, in addition to support from the National Science Foundation.

Phase II 2019–2021: Research in systematics, ethnobotany, and traditional plant-based health care; capacity building; and sustainable management in the South Pacific region at an estimated cost of \$300,000, in addition to support from the National Science Foundation.

E. Plant Biodiversity and Regional Coordination in the Caribbean

NYBG's presence in this region dates back to 1900, and over the years, NYBG scientists have amassed the world's most complete documentation of the plants of the area. For decades, NYBG has worked to train a cadre of capable local scientists, both through its Graduate Studies Program and in the region, in order to build local capacity to conserve and manage biodiversity. To build on these strengths, NYBG would like to create a hub located on a Caribbean island with the appropriate political, cultural, and infrastructural requirements, with an on-site regional coordinator, ideally in a formal partnership with a local NGO. This strategic move would build on our years of capacity-building to further strengthen and expand NYBG's program, and bring NYBG's scientific expertise more deeply into policy decisions about biodiversity conservation in the Caribbean, which will ultimately be made by the residents of countries of the region.

Impacts by 2021:

- Assessment of the conservation status of all plant species in the region (see Plants of the Americas Project in II.A. below).
- Training of at least ten additional Caribbean scientists.
- Digitization and geo-referencing of all Caribbean species in NYBG's Herbarium collections (see Plants of the Americas Project in II.A. below).
- An operating regional hub that is strengthening local conservation capacity across the Caribbean.

Phase I 2016–2018: Support of \$425,000 is needed for plant conservation, the regional hub, and capacity-building initiatives in the Caribbean region during this period.

Phase II 2019–2021: Support of \$425,000 is needed for plant conservation, the regional hub, and capacity-building initiatives.

F. EcoFlora of New York City

NYBG is leading a new, multipartner New York City-wide initiative to create an online resource for understanding plant diversity and the factors that influence plant growth in an urban environment, and to establish an ongoing monitoring capacity in NYC. More than 40% of New York City's native plant species have disappeared, a result of continued development, an influx of invasive species, and rising sea levels, among other contributing factors.

Impacts by 2021:

- Assuming funding beginning in 2016, a Web-based EcoFlora covering all of New York City available to inform urban ecology, conservation planning, and environmental education.
- A cadre of citizen scientists trained to collect data on plants' ecological relationships.
- The structure and trained volunteers for an ongoing monitoring program.

Phase I 2016–2018: Data collection, volunteer training, and management in all five NYC boroughs at an estimated cost of \$1,000,000.

Phase II 2019–2021: Data collection and organization, Web publication, volunteer training, and management for ongoing monitoring effort throughout NYC at an estimated cost of \$500,000.

II. Institutional Projects and Programs

These are institution-wide initiatives involving and enhancing the work of NYBG faculty, staff, and students.

A. William and Lynda Steere Herbarium

Many digitization projects will be accomplished in connection with the research and conservation projects mentioned above. In addition, two major digitization projects are high priorities to continue, and with uninterrupted funding, be finished during the 125th Anniversary Program period.

- **Complete the Plants of the Americas Project**

NYBG is digitizing the specimens that document the plant diversity of North and South America at the rate of about 400,000 per year. The Garden holds unparalleled scientific assets for the documentation and conservation of this part of the world. These resources include the deep and broad expertise of Garden scientists and the world's most extensive plant research collections for the Americas, housed in the William and Lynda Steere Herbarium and LuEsther T. Mertz Library. Assuming funding continues, by 2021 the Garden is on track to complete digitization of all five million specimens; make them available via the Internet through the C.V. Starr Virtual Herbarium and Mertz Digital Library; conduct preliminary conservation assessments on these species utilizing new methodology developed by Garden scientists; and use these assessments to inform decision-making by international agencies such as the Convention on International Trade in Endangered Species (CITES) and International Union for the Conservation of Nature (IUCN).

Phase I 2016–2018: Digitization and conservation assessments at an estimated cost of \$200,000 in additional private funding.

Phase II 2019–2021: Digitization and conservation assessments at an estimated cost of \$4,000,000 in government funding and \$200,000 in private funding.

- **Complete World Flora Online**

Recognizing that we are in the midst a global biodiversity crisis—an estimated 20% of all plant species at risk of extinction—the United Nations Convention on Biological Diversity has called for an “online flora of all known plants,” as an essential scientific foundation for halting these biodiversity losses. NYBG is leading the effort, along with Missouri Botanical Garden, Royal Botanic Gardens, Kew, and Royal Botanic Garden Edinburgh, with participation from more than 30 additional research institutions from around the world. With uninterrupted funding, by 2021 NYBG expects to have fulfilled its commitment to contribute 80,000 records to World Flora Online.

Phase I 2016–2018: Digitization of all plant descriptions from NYBG publications and publications of Garden staff and collaborators at an estimated cost of \$1,000,000 in new funding. Partial funding is already in hand.

Phase II 2019–2021: Oversee digitization of plant descriptions at collaborating institutions and from the LuEsther T. Mertz Library for targeted plant groups at an estimated cost of \$1,300,000.

This work was begun with support from Google Inc. and the Alfred P. Sloan Foundation. This program will not be continued without restricted funding.

B. LuEsther T. Mertz Library

The Mertz Library is one of the major resources supporting research and study in the field of botanical science, noted for the importance, breadth, and accessibility of its holdings. The General Research Collection consists of more than 550,000 volumes, including nearly 12,000 serial titles, and grows every year. Its archives contain over 11 million items, including an extensive collection of collectors' field notebooks. Increasingly, acquisitions come in the form of born digital—no print version exists. In the digital age, collecting, maintaining, and providing access to this information are more challenging than ever before.

Phase I 2016–2018: Accession, preservation, cataloging, and digitization of current materials to support scientific research at an estimated cost of \$750,000.

Phase II 2019–2021: Accession, preservation, cataloging, and digitization of current materials to support scientific research at an estimated cost of \$750,000.

The costs of building the collections of the Mertz Library will be part of the Fund for the Garden.

C. Cullman Program for Molecular Systematics

During the 125th Anniversary Program period, NYBG's Cullman Program will continue its historic record of leadership in the forefront of technological advances in the sciences. Using the resources of the Pfizer Plant Research Laboratory, the Cullman Program applies molecular and genomic methodologies to understand the molecular basis of plant diversity and survival. This work informs initiatives in biodiversity, conservation, climate change, agriculture, resource management, and plant-based medicine. To continue its leadership role, diversify its funding portfolio, and maintain its ability to train graduate students, the program needs to have skills and equipment for Big Data analysis. To do so, it must upgrade the existing Computer Cluster, acquire a new scanning electron microscope and a light microscopy imaging system, and upgrade specimen preparation equipment and DNA and RNA extraction equipment. This equipment will also support other programs in the Pfizer Lab.

Phase I 2016–2018: New equipment and new technology.

Phase II 2019–2021: New technology, upgraded computer systems, and staff training.

A need exists to endow the program at the level of \$10,000,000.

D. Center for Conservation Strategy

With seed funding from private sources in 2015, the Garden has launched a major new initiative, the Center for Conservation Strategy. The Center will focus on integrating NYBG's institutional assets to maximize impacts on conservation outcomes. Specific initiatives include:

- **Complete EcoFlora of New York City** (see I.F. above.)
- **Complete Conservation Assessments in the Plants of the Americas Project** (see II.A. above.)

- **Small Grants Program**

In order to extend botanical research and conservation beyond the expertise of its large staff, NYBG will establish a competitive small grants program targeting specific conservation issues. The intent is to create a high-profile program through which young scientists will vie for research funding, giving NYBG a means to influence the creation of botanical knowledge and foster the careers of future talent in the conservation science arena.

- **Forum for Conservation Action**

The Garden intends to create a forum for internal staff and invited adjunct scientists who are working on conservation issues to share information on best practices, cross-fertilize thinking, assess opportunities, optimize responses, and catalyze action, thereby increasing NYBG's impact on urgent conservation problems around the world. This forum would focus on local capacity-building, creation and strengthening of parks and reserves, sustainable use of botanical resources, and citizen science.

- **Annual Conservation Symposium**

A high-profile annual conservation symposium for the general public will be held in the Arthur and Janet Ross Lecture Hall. Topics will vary year to year, and will be discussed and debated by NYBG scientists and invited lecturers and panelists. The symposium will be broadcast live on the Web for those people who cannot attend in person, and archived for future viewings.

Phase I 2016–2018: Small grants program, conservation action forum, and conservation symposium at an estimated cost of \$1,000,000 in additional funding.

Phase II 2019–2021: Small grants program, conservation action forum, and conservation symposium at an estimated cost of \$1,500,000 (includes \$500,000 for the small grants program).

This program will not move forward without restricted funding.

E. Center for Tropical Exploration

Building on decades of work in the tropical forests, including in Areas of Botanical Concern, NYBG will consolidate its scientific and conservation endeavors in tropical ecosystems around the world in a new Center for Tropical Exploration. It will build on existing strengths within the fabric of the institution and, through endowment, create the resources to sustain future generations of scientific staff and their work. In an age of accelerating climate change, emerging health threats, and increasing species extinction, this is a critically important investment.

Phase I 2016–2018: Initial reorganization and endowment at a cost of \$5,000,000.

Phase II 2019–2021: Strengthened staff leadership and endowment at a cost of \$10,000,000.

F. Graduate Training Center

NYBG's Commodore Matthew Perry Graduate Studies Program, one of the most important programs of its kind in the world, is conducted in affiliation with the City University of New York, Columbia University, Cornell University, Fordham University, New York University, and Yale University. The Graduate Training Center is one of only a few that provides specialized training in specimen- and field-based research, as well as in cutting-edge molecular and genomic approaches. The Program enrolls 20 to 30 Ph.D.-level students, including international students, and plans to increase the number of Master's-level students, especially to provide trained professionals for on-the-ground conservation programs.

Phase I 2016–2018: Graduate training for laboratory and field botanists at an estimated cost of \$750,000.

Phase II 2019–2021: Graduate training for laboratory and field botanists at an estimated cost of \$750,000.

The basic \$250,000 annual funding for this program, supporting the entire operation, must be raised every year. A need exists to endow this annual cost and name the center with a gift of \$5,000,000.

G. NYBG Press

Established in 1896, The New York Botanical Garden Press publishes and disseminates the research carried out by scientists at the Garden and botanists worldwide, including journals, serial publications, and books focusing on the areas of systematics, economic botany, and conservation. NYBG Press produces more publications than any other botanical press in the Americas.

Phase I 2016–2018: Activities resulting in a wide variety of publications for scientific and lay audiences.

Phase II 2019–2021: Activities resulting in a wide variety of publications for scientific and, particularly, lay audiences.

It is required that the NYBG Press be self-funding through its publications activities. It does not seek private or government sources of support.

III. **New Tools**

A. **Geographic Information Systems**

The GIS Laboratory enables the analysis and visualization of plant distributions and the habitats in which they live, which is essential for the work that the Garden is proposing to carry out in biodiversity conservation around the world. This plan proposes capacity upgrades that will make GIS a fundamental scientific tool for understanding species composition, density, abundance, and yield of important forest resources in different habitats, and better visualizing the threats to these areas. Garden scientists will use it regularly as they carry out biodiversity conservation work around the world.

Phase I 2016–2018: Remote sensing technology to provide better ecological information, a cloud-based system so that all scientists can access GIS software from their desktops, and upgraded computers in the GIS Lab.

Phase II 2019–2021: Additional dedicated GIS Lab staff and further improvements to technology and equipment.

It is hoped that funding for this new technology and equipment can be generated from U.S. government agencies.

B. **Digital Asset Management System**

Digital Asset Management System (DAMS) is a combination of software, hardware, and professional services that provides a central location for storing, managing, and accessing digital assets and their accompanying metadata. It streamlines processes associated with cataloging, search/retrieval, rights, security, tracking, preservation, and data integrity. Increasingly, the intellectual assets of NYBG are digital. We need a single system to combine and manage digital assets from all departments: Steere Herbarium, Mertz Library, Institute of Systematic Botany, Institute of Economic Botany, Creative Services, NYBG Press, Horticulture, Continuing Education, etc. Once implemented, all assets could be queried across all departments, with controlled access and security. This would ensure the sustainability and integrity of our digital assets over time, while increasing discoverability and usage.

Phase I 2016–2018: Detailed planning and initial system design for the DAMS.

Phase II 2019–2021: Comprehensive system design and initial implementation

It is hoped that funding for this new technology can be generated from U.S. government agencies.





125TH ANNIVERSARY PROGRAM PLAN 2016–2021

ANCHORING THE COMMUNITY

Phase I 2016–2018:

- I. Complete and Open New East Gate
- II. Strengthen and Expand Outreach Programs for Changing Audiences in the Bronx
- III. Restore Public Funding for Union Employees
- IV. Catalyze Neighborhood Revitalization and Economic Planning

Phase II 2019–2021:

- IV. Catalyze Neighborhood Revitalization and Economic Planning
- V. Achieve Distinction as the “Employer of Choice”

ANCHORING THE COMMUNITY

NYBG makes a tremendous contribution to the economic, educational, and intellectual well-being of the people who live and work in the Bronx. NYBG offers 20% of its open hours free to the public. It is an economic driver in the Bronx, employing 475 full-time positions and 250 seasonal staff, many of them Bronx youth. The Garden's overall economic impact on New York City is \$159,000,000 annually. In the past ten years, 2,700 construction jobs have been created by NYBG capital improvement projects. Also during this period, more than \$150,000,000 in public and private funding has been invested here to improve the physical plant.

Additionally, the Garden's international reputation adds distinction to New York City and to the Bronx. Casual visitors from throughout the region, the U.S., and the world are constantly coming to the Garden, as are scientific and horticultural professionals.

Furthermore, the Garden frequently receives significant publicity in international publications and our hard-copy and digital publications, universally accessible, reach a global audience.

Our Goal Is: To continue to participate in building the Bronx and creating shared value for the community.

To celebrate the 125th Anniversary of NYBG, the following five projects have emerged from the strategic planning process as the highest priorities for "Anchoring the Community."

I. **Complete and Open New East Gate**

Opening in 2017, this improved entrance will improve accessibility from the east side of our neighborhood and the #2 and #5 subway lines.

Phase I 2016–2018: Funding for this multimillion-dollar project is in hand, and construction began in early 2016.

II. **Strengthen and Expand Outreach Programs for Changing Audiences in the Bronx**

As a citizen of the Bronx, we remain committed to keeping the Garden in touch with and accessible to local residents in the Borough. Programs to do so include new Bronx Green-Up and NYC Composting initiatives, and an increased emphasis on urban farming in the Bronx.

Phase I 2016–2018: These programs will be funded in the Fund for the Garden.

III. **Restore Public Funding for Union Employees**

In recent years, fewer and fewer NYBG positions are City-funded. Together with other leading New York City cultural institutions, we will mount a determined unified lobbying effort to achieve a more sustainable level of City funding for these positions.

Phase I 2016–2018: A concerted lobbying effort with City funding restoration as the successful outcome.

IV. **Catalyze Neighborhood Revitalization and Economic Planning**

Working with neighbors, elected officials, and our local institutional partners, we will continue to create new projects on the Webster Avenue Corridor.

Phase I 2016–2018: Development of new ideas and projects.

Phase II 2019–2021: Implementation of selected projects and continuation of project development.

These projects must be funded by private developers.

V. **Achieve Distinction as the “Employer of Choice”**

As one of the largest employers of youth in the Bronx, NYBG has the opportunity to both improve its own customer service and better prepare its young workforce. We will expand our training programs for part-time and seasonal employees to teach them the skills they need to succeed.

Phase I 2016–2018: Program development and initial implementation.

Phase II 2019–2021: Full implementation as the budget permits.

This program will be funded in the Fund for the Garden.



125TH ANNIVERSARY PROGRAM PLAN 2016–2021

BUSINESS ACTIVITIES

Phase I 2016–2018:

- I. Create Customer Relationship Management System
- II. Refine and Intensify Marketing and Communications to Motivate New and Repeat Visitation
- III. Target Tourist Audiences—Both Domestic and International
- IV. Create Amenities for Visitors

Phase II 2019–2021:

- II. Refine and Intensify Marketing and Communications to Motivate New and Repeat Visitation
- III. Target Tourist Audiences—Both Domestic and International
- IV. Create Amenities for Visitors
- V. Acquire New Ticketing System
- VI. Create a Central Point of Contact for Customer Service and Sales

BUSINESS ACTIVITIES

Earned revenue is becoming an ever more important part of NYBG's financial picture, comprising 30% of total revenue in 2015. Business activities encompassing admissions and parking, membership and group attendance, retail and business development, continuing and public education, and food service and catering all contribute toward a bottom line that depends on attracting visitors to the Garden. Once they come, we hope they fall in love with this extraordinary place, become repeat visitors, members, and donors. By 2021, NYBG expects to have 1,250,000 annual visitors.

Our Goal Is: To make improvements to business activities to attract, accommodate, and provide a high-quality experience for new and existing audiences in order to increase overall gross revenue in this area from 30% to 32–34% of total revenue.

To celebrate the 125th Anniversary of NYBG, the following six initiatives have emerged from the strategic planning process as the highest priorities for focus in the period 2016–2021.

I. **Create Customer Relationship Management System**

Marketers need to know as much as possible about their customers in order to make their marketing efforts more effective. A “smart” Web platform is a fundamental tool to capture information about visitors and target their interests in order to market to them more effectively. A better content management system is necessary to organize the increasingly varied and complex content that goes into a sophisticated marketing effort.

Phase I 2016–2018: Web platform planning and installation to be funded through the Fund for the Garden.

II. **Refine and Intensify Marketing and Communications to Motivate New and Repeat Visitation**

The vast majority of the Garden's visitors come from the Tri-State area. Indeed, 30 million people live within driving distance, and they comprise the likeliest visitors. To penetrate this market more deeply, the Garden will intensify its marketing and publicity efforts, using the special exhibitions program to motivate new and repeat visitation.

Phase I 2016–2018: Additional advertising, promotion, public relations, and social media to be funded through the Fund for the Garden.

Phase II 2019–2021: Additional advertising, promotion, public relations, and social media to be funded through the Fund for the Garden.

III. **Target Tourist Audiences—Both Domestic and International**

Working with various segments of the travel trade, NYC & Company (the City's tourism and marketing agency), and I Love NY (New York State tourist bureau), NYBG will seek to increase visitation from domestic and international tourists visiting New York. This will entail a specialized marketing effort to navigate the complex travel trade and connect with the right influencers to get on tourists' itineraries before they arrive in NYC.

Phase I 2016–2018: Targeted marketing campaign to be funded through the Fund for the Garden.

Phase II 2019–2021: Targeted marketing campaign to be funded through the Fund for the Garden.

IV. Create Amenities for Visitors

As visitation numbers and expectations grow, NYBG will need to offer more visitor amenities. Additional food service is an urgent need and is being considered as part of the renovation of the Mosholu Gate/Old Lab. More trams are becoming increasingly necessary. Parking, restrooms, and retail opportunities are also inadequate to serve the larger audiences we expect in the future.

Phase I 2016–2018: New tram fleet and Mosholu Gate/Old Lab business and master planning as part of larger capital projects in the “Creating a Green Urban Oasis” section of this plan (see p. 15).

Phase II 2019–2021: Mosholu Gate/Old Lab architectural design and construction (see p. 15).

V. Acquire New Ticketing System

Today's technology allows visitors to purchase tickets on their mobile phones, check themselves in, and skip the lines by purchasing tickets at self-service kiosks. In order to remove barriers to entry and offer these expected conveniences, NYBG must install a ticketing system capable of performing these functions while fulfilling our needs for management information. Any new system would also include the ability to scan tickets at entry and capture more accurate visitor information upon which to make future decisions.

Phase II 2019–2021: System analysis, design, acquisition, and operation at an estimated cost of \$450,000.

The new system will be funded by net earned revenue from visitors.

VI. Create a Central Contact Center for Customer Service and Sales

Currently, our programs and courses are sold by the same departments responsible for developing and delivering the content, with some help from the Marketing Department. There are also various customer service lines throughout the Garden, which creates a silo approach to service and sales. A central contact center could provide a more efficient way to respond to and resolve nearly all inquiries, while facilitating up-selling, providing a more unified voice, and creating a structure with a greater likelihood of engaging visitors in multiple products, programs, and courses, thus maximizing visitor engagement and Garden revenue.

Phase II 2019–2021: Reorganization, training, and implementation to be funded as part of ongoing operations.



125TH ANNIVERSARY PROGRAM PLAN 2016–2021

MANAGEMENT AND INSTITUTIONAL NEEDS

Phase I 2016–2018:

- I. Executive Reorganization: Administration
- II. IT Operations and Infrastructure
- III. Security and Operations Staffing

Phase II 2019–2021:

- I. Executive Reorganization: President of the International Plant Science Center
- II. IT Operations and Infrastructure
- III. Security and Operations Staffing

MANAGEMENT AND INSTITUTIONAL NEEDS

In an institution as large and complex as NYBG, attention must be paid to both leadership matters and the underlying systems and administrative services that support all aspects of the staff and operations. The IT needs of the institution are large and rapidly changing, both in support of administrative functions and programmatic functions. The staffing needs of the organization must respond to growth within NYBG as well as needs and opportunities in the wider world.

Our Goal Is: To enhance management, staff, and supporting services, systems, and facilities to ensure that the activities of the institution are conducted with a high degree of professionalism.

To celebrate the 125th Anniversary of NYBG, the following three initiatives have emerged from the strategic planning process as the highest priorities for focus in the period 2016–2021.

I. **Executive Reorganization**

As discussed with the Board, during Phase I, several new executive positions are being instituted. These include the Director of NYBG; a new EVP for Finance and Administration; a new EVP for External Relations; a new VP for Marketing; a new AVP for Visitor Experience; and a new major gifts officer. During Phase II, NYBG will recruit a President of the International Plant Science Center to strengthen its science and conservation programs at a time of generational change within the staff. NYBG will recruit an internationally recognized leader with a track record of building successful programs at similar institutions to lead this crucial aspect of the institution. The new President will be charged with envisioning a future for NYBG's science and conservation programs commensurate with the challenges to plant biodiversity and the opportunities for ground-breaking research; deploying NYBG's existing scientific assets and identifying what new capacities are needed; and attracting the resources necessary to realize and sustain this vision.

Phase I 2016–2018: Implementation of necessary reorganization, and hiring and training of excellent candidates for new administrative positions.

These new positions and upgrades are being funded for a two-and-a-half year period by the LuEsther T. Mertz Charitable Trust.

Phase II 2019–2021: New President of the International Plant Science Center with staff support and office space.

Private funding will be sought for this need.

II. **IT Operations and Infrastructure**

Virtually every element of NYBG operations depends on one IT system or another. As the finances of NYBG and the regulations governing employment become ever more complex, many businesses are turning to expert vendors who now offer cloud-based services to manage their financial, payroll, and HR functions and integrate them for accuracy and efficiency. By the end of the 125th Anniversary Program period, NYBG expects to complete significant improvements to systems security, storage capacity, backup protocols, disaster recovery procedures, and staffing of IT operations.

Phase I 2016–2018: Systems consultant, and with consultant's help, the identification, purchase, and installation of an integrated financial, payroll, and human resources system at an estimated cost of \$2,024,359; \$750,000 of this is currently funded.

Phase II 2019–2021: Implementation of other improvements recommended by the systems consultant at an estimated cost of \$1,375,641.

III. Security and Operations Staffing

The audience at NYBG has been growing at an annual rate between 3–5%, but the staff that maintains buildings and provides security has not grown since the 2009 budget cuts.

Phase I 2016–2018: Initial expansion of security and operations staff as the budget permits.

Phase II 2019–2021: Continued expansion of security and operations staff as needs warrant and the budget permits.



125TH ANNIVERSARY PROGRAM PLAN 2016–2021

FUND FOR THE GARDEN (formerly the Annual Fund)

2016–2021:

- I. Build the Board of Trustees
- II. Establish New Committees
- III. Develop a Fully Articulated Major Gifts Program
- IV. Continue to Engage New Donors Through Special Events
- V. Diversify Corporate and Foundation Funding
- VI. Pursue a Proactive Planned Giving Program
- VII. Plan and Implement Mobile Fundraising Capabilities

FUND FOR THE GARDEN

Over the past 25 years, a remarkable investment of private philanthropy has transformed the Garden into a beautifully curated, impeccably restored, and meticulously maintained paradise. Its educational programs which impact hundreds of thousands of children and teachers each year, many from the City's poorest districts, depend on private support. The scientific programs, which continuously expand the frontiers of plant knowledge and increasingly employ this expertise in the race to conserve nature, depend on private funds to innovate. A loyal and generous base of individuals, foundations, and corporations continues to invest in the Garden. As the Garden faces generational change, growing needs, and ever-increasing competition for funds, its plan for continued leadership in fundraising is fundamental to its success.

Our Goal Is: To increase the Fund for the Garden by 5% per year to \$27,500,000 by 2021, to continue to provide 33% of the operating budget, and to fund the capital and special projects in the Strategic Plan.

To celebrate the 125th Anniversary of NYBG, the following seven initiatives have emerged from the strategic planning process as the highest priorities for focus in the period 2016–2021.

I. **Build the Board of Trustees**

The bedrock of private support for NYBG has always been the Board. Over the next six years, finding and engaging new Board members with a passion for the Garden's mission, the skills, talents, and connections to contribute to NYBG's excellence, and the capacity for significant support is one of the institution's highest priorities.

II. **Establish New Committees**

To widen the pool of volunteer solicitors, a new Major Gifts and Planned Giving Committee, a new Special Events Committee, and a new Business Committee are envisioned. The purpose of these committees would be to extend the reach of the Garden to new potential donors and to bring them into the Garden family through events, behind-the-scenes tours, and private meetings.

III. **Develop a Fully Articulated Major Gifts Program**

Through a strengthened Major Gifts staff and with the leadership of the new Major Gifts Committee, NYBG will pursue a systematic process to develop a growing pipeline of new individual donors with capacity and interest to support the priorities outlined in this plan. The major gifts effort will involve senior development staff directly in building relationships with five- and six-figure donors, freeing the President to concentrate efforts on the Board and on leadership-level gifts.

IV. **Continue to Engage New Donors Through Special Events**

Events are often the first route to donor engagement. They provide an enjoyable means to remind donors why they support NYBG and give newer donors an opportunity to meet long-standing supporters who share their passion for the Garden. NYBG will continue to pursue its full schedule of gala and cultivation events, and use them strategically to develop new donor relationships.

V. **Diversify Corporate and Foundation Funding**

With its large range of programmatic activities, from educating underserved children to scientific innovation to conservation in endangered ecosystems to highly attended exhibitions, NYBG has many ways to connect with funders' priorities. NYBG will organize the institutional funding staff to capitalize on these opportunities, enabling them to become familiar with the full range of the Garden's activity and encouraging them to think strategically and synergistically about funding possibilities.

VI. **Pursue a Proactive Planned Giving Program**

In order to meet the ambitious endowment goals of the 125th Anniversary Program, NYBG will further build its Planned Giving Program. Garden Members and friends will be systematically educated about philanthropic estate planning, and major donors will be informed about techniques to augment their gifts through bequest intentions, trusts, alternative assets, annuities, and other tools. Staff will have the capacity to discuss options knowledgeably and model the effects of various planned giving vehicles. Seminars by experts in the field will provide prospective donors and their financial advisors with information and ideas.

VII. **Plan and Implement Mobile Fundraising Capabilities**

Mobile fundraising allows for an easy, targeted, and multichannel approach for increasing donations. Over the next three to seven years, this technology will play an increasingly more significant role in the fundraising efforts for most non-profits. Using these tools, donors can make a gift from any device in response to e-mail, social media, text messaging, direct mail, radio, television, and print advertisements. While complementing our current Membership and Development activities, investing in a mobile fundraising solution will help develop the pipeline for greater giving from new and existing audiences.



125TH ANNIVERSARY ENDOWMENT
2016–2021



125TH ANNIVERSARY ENDOWMENT 2016–2021

ENDOWMENT NEEDS

Phase I 2016–2018: \$18,000,000

- I. Increase Unrestricted Endowment
- II. Fund New Program Endowments
- III. Create New Endowed Chairs

Phase II 2019–2021: \$107,000,000

- I. Increase Unrestricted Endowment
- II. Fund New Program Endowments
- III. Create New Endowed Chairs

125TH ANNIVERSARY ENDOWMENT NEEDS

Endowment is one of the most important financial underpinnings an institution can have. It represents a long-term investment by today's donors in the future generations who will enjoy and benefit from the work of the institution. In the case of The New York Botanical Garden, those benefits are many. Endowment sustains the quality of the urban oasis that is at the heart of our mission. It perpetuates programs such as changing exhibitions and the Edible Academy, which educate adults and children alike. It furthers scientific endeavor that helps save the plants of the world and trains future botanists. It is the bedrock of our financial health.

Endowment secures our future and powers our growth. Increasing NYBG's endowment is one of the most urgent goals of the 125th Anniversary Strategic Plan. Endowment will cement the legacy of leadership the institution has enjoyed for the past 25 years and provide the means to perpetuate the culture of excellence here that is now admired around the world.

It has taken 125 years for NYBG's endowment to grow to \$287,000,000, its value as of December 31, 2015. Endowment income in fiscal year 2015 provided about 21% of the annual revenue necessary to support the Garden's complex and far-reaching operations. To succeed as it faces generational change, growing needs, and ever-increasing competition for funds, the Garden must substantially increase the size of its endowment.

Our Goal Is: To create the 125th Anniversary Endowment Fund with \$125,000,000 in new gifts, pledges, bequests, and bequest intentions, and to receive sufficient new endowment funding for NYBG's endowment to provide 25% of the Garden's operating funds by the end of 2021.

To celebrate the 125th Anniversary of NYBG, the following three initiatives have emerged from the strategic planning process as the highest priorities for focus in the period 2016–2021.

I. **Increase Unrestricted Endowment**

Unrestricted endowment provides the most flexible, and thus the most valuable, form of endowment support. In addition to outright gifts, the Garden will mount an intensive effort to encourage members of its family to remember NYBG in their Wills. Another method to increase unrestricted endowment would be to encourage Fund for the Garden donors to consider endowing their regular level of Fund for the Garden giving.

II. **Fund New Program Endowments**

Over 125 years, NYBG has established a set of programs that are fundamental to its operations and whose excellence must be sustained through endowment support. These programs provide donors with a way to connect deeply with areas of interest and to make gifts whose impact will last for the rest of the Garden's life. The following opportunities for lasting impact and significant naming recognition are available:

▪ **Herbarium Collections—\$15,000,000**

The collections and activities within the Herbarium form the scientific underpinning of NYBG's scientific and conservation activity. The 7.8 million specimens in our care are being augmented daily by the explorations of NYBG's scientific staff in the urgent quest to understand and document the world's plant biodiversity before it is lost. This endowment will safeguard our ability to prepare and accession new species specimens, care properly for the collections we curate, and make our collections digitally accessible to the scientific world.

▪ **Center for Tropical Exploration—\$15,000,000**

Since its founding, NYBG scientists have been exploring the tropics. Tropical forests are the most biodiverse places on Earth, and their importance is growing as mankind struggles to deal with the interlocking threats of deforestation, extinction, and climate change. Support to ensure uninterrupted work in these areas is a contribution to address some of the most serious threats to our planet.

- **Lewis B. and Dorothy Cullman Program for Molecular Systematics—\$10,000,000**
 Through the Cullman Program, NYBG has achieved preeminence in molecular-level understanding of plant biology and evolution, informing conservation at a whole new level. This endowment would secure its ability to remain on the cutting edge of a field challenged by rapid changes in technology.
- **Rock Garden—\$10,000,000**
 Since it was established by T. H. Everett in the 1930s, the Rock Garden has been one of NYBG's most treasured gems. This endowment will assure that it is beautifully curated and maintained for as long as NYBG exists.
- **Fund for Horticulture—\$10,000,000**
 Today NYBG's horticultural activities are conducted at an amazingly high level of excellence fostered by horticultural management who instills the passion for excellence in a talented and dedicated staff. It was not always thus. Endowments within the Fund for Horticulture will help sustain the staff and leadership resources to continue caring for our precious horticultural assets at the highest level.
- **Magnolia Collection—\$10,000,000**
 In concert with the restoration and expansion of this five-acre historic landscape, an endowment will ensure that the improvements described in "Creating a Green Urban Oasis" (see p. 17) will be maintained over the long term.
- **South Forest—\$10,000,000**
 As part of the reclamation of this 25-acre landscape, an endowment will ensure that it is well taken care of, and that the improvements described in "Creating a Green Urban Oasis" (see p. 17) will be well-maintained over the long term.
- **Endowment for Exhibition Programs—\$8,000,000**
 Although exhibitions are relatively new to the program of NYBG, they are essential to the business model and are likely to remain so. This endowment will support the staff necessary to plan exhibitions, provide seed money to develop new ideas, and partially support exhibit curation and maintenance.
- **Institute of Systematic Botany—\$5,000,000**
 Systematic botany is fundamental to human understanding of the plant world and a necessary starting point for effective interventions to save it. For its entire existence, NYBG has been a world leader in systematic botany. With this endowment in place, it can sustain its leadership position in an increasingly complex world.
- **Fund for Trees—\$5,000,000**
 With the oldest native forest left in New York City at its heart surrounded by many significant collections of trees from around the world, NYBG is defined by its distinguished trees. It is essential that we continue to have the capacity to care for our trees at the highest possible level, and these endowments will sustain our ability to do so.
- **School of Professional Horticulture—\$5,000,000**
 For over 80 years, the School of Professional Horticulture at The New York Botanical Garden has trained the world's leading horticulturists. The School's unique program combines top-notch academics with hands-on training, including plant walks, field trips, externships, and special lectures. Our students are highly sought-after for internships and full-time employment, with a nearly 100% job placement rate in careers in public parks and gardens, landscape design/build firms, and private estates worldwide.

- **Endowment for the Graduate Training Center—\$5,000,000**

The Commodore Matthew Perry Graduate Studies Program provides advanced preparation for approximately 40 students annually working toward the Ph.D. degree. The Program operates in conjunction with six metro-area universities. The Program serves a diverse student body, and Garden graduates have come from Asia, Africa, Europe, and Latin America. After graduating, most foreign students return to their home countries to hold positions in government agencies, research centers, universities, and botanical gardens, where they have a direct impact on conservation, education, and biodiversity research.

- **Endowment for Greenhouse Horticulture—\$3,000,000**

Greenhouses are the literal incubators of NYBG. It is there that the work of nurturing and growing the plants that populate our gardens and exhibitions takes place. This endowment will not only help keep the physical structures in top condition, but also help support plant acquisition and the activities of the horticultural staff that take place in NYBG's many greenhouses.

- **Mertz Library Acquisitions Endowment—\$3,000,000**

The Mertz Library is the world's preeminent botanical library, home to millions of books, manuscripts, and sheet materials. In order to maintain its ability to continue documenting plant science, garden design, urban planning, the uses of plants, and the many other subjects it contains, it is essential that funds be available to build the collections.

III. **Create New Endowed Chairs**

Leadership is an important determinant of quality. Over the years, NYBG has succeeded in endowing many of its leadership positions, giving donors a personal connection to programs and staff of particular interest to them. During the 125th Anniversary Strategic Plan period, endowed chairs take on an added importance. With new appointments in science, horticulture, and education expected as current incumbents retire, as well as newly added positions, endowed chairs increase our ability to attract the best candidates. Endowed chairs also enable us to retain excellent staff leaders. The following chairs are available for endowment and naming:

- **Director of the Nolen Greenhouses and Curator of the Orchid Collection—\$3,000,000**

Marc Hachadourian

- **Director of the LuEsther T. Mertz Library—\$2,500,000**

Susan Fraser

- **Vice President for Laboratory Research—\$2,500,000**

Dennis Wm. Stevenson, Ph.D.

- **Curator of Woody Plants—\$2,000,000**

Deanna Curtis

- **Head of Special Collections, Research and Archives—\$2,000,000**

Stephen Sinon

- **Manager of the Edible Academy and Ruth Rea Howell Family Garden—\$2,000,000**

Annie Novak





125TH ANNIVERSARY CAPITAL PLAN
2016-2021



125TH ANNIVERSARY CAPITAL PLAN 2016–2021

AN EXPANSIVE AND COMPLEX CAMPUS

To establish a context for its capital plans, it is important to remember that NYBG has 38 structures, 780,000 square feet of building space, 10.2 miles of paths and roads, and covers 250 acres. While its gardens and landscapes are the most visible, NYBG is also an institution with the scope and complexity of a university campus.

Phase I 2016–2018
Phase II 2019–2021

- Conservatory Dome and Energy Project
- New Exhibition House
- Adaptive Reuse of Old Laboratory and Mosholu Gate Redesign
- Lorillard Stable and Operations Compound
- Restoration of the South Forest
- Rejuvenation of the Rock Garden
- Restoration and Expansion of the Magnolia Collection
- Restoration of Daylily/Daffodil Walk
- Infrastructure Renewal—Paving, Lighting, and Stormwater Management
- New Tram Fleet
- New Center for Continuing Education
- Everett Children's Adventure Garden Restoration
- The Edible Academy
- GreenSchool Renovation
- Systems and Equipment
- Information Technology

CREATING A GREEN URBAN OASIS: BUILDINGS

▪ Conservatory Dome and Energy Project

Elements of the Conservatory that were not restored during the 1990s renovation, including the compression ring and heat distribution system, now require replacement. In addition, the doors, restrooms, roof, generator, steam boilers, and stormwater drainage will be repaired.

Phase I 2016–2018: \$15,000,000

Raised to Date: \$ 8,250,000

Requests Pending: \$ 5,000,000



The Dome's compression ring needs replacement.

▪ New Exhibition House

A new programmatic and revenue generating facility to expand audiences and relieve pressure on the Conservatory will be planned and designed. It should be a new structure with flexible space to mount exhibitions, and it may or may not be a glasshouse. Construction will take place beyond the period covered by the strategic plan.

Phase I 2016–2018: \$1,000,000 (\$1,000,000 committed for program/business planning)

Phase II 2019–2021: \$4,000,000 (architectural planning and design)



Two preliminary ideas for a new exhibition house

- **Adaptive Reuse of Old Laboratory and Mosholu Gate Redesign**

The Old Lab is located in a high-traffic area near the Mertz Library and Mosholu Gate with no current strategic function. A new program plan for the Lab may include exhibition space, food service, a retail shop or classrooms, and the Mosholu Entrance redesign will create a “sense of arrival” and orientation for Garden visitors.

Phase I 2016–2018: \$ 2,000,000 (planning and design)

Phase II 2019–2021: \$13,000,000 (construction, depending on final program plan)



An opportunity for new visitor services amenities

- **Lorillard Stable and Operations Compound**

The rehabilitation of the historic Lorillard Stable as well as the other buildings and facilities that make up the Operations Compound is needed to make this a safer and more efficient service area. The work to be done includes repair and replacement of the roof, gutters, skylights, masonry, mechanical, electrical, and plumbing systems. During the course of this strategic plan, emergency repairs are needed as well as the planning and design of a full restoration, which would take place beyond the period covered by this plan.

Phase I 2016–2018: \$2,000,000 (emergency repairs)

Phase II 2019–2021: \$2,000,000 (planning and design)



A historic structure in dire need of repair and renovation

CREATING A GREEN URBAN OASIS: LANDSCAPES

▪ Restoration of the South Forest

This 25-acre landscape has never been maintained as forest. Its originally intended use, which never occurred, was as an exhibition area for woody plant collections. A forest management plan that would restore the forest landscape needs to be developed during this strategic plan. Major additions and endowment support are beyond the period covered by the plan.

Phase II 2019–2021: \$2,000,000 (planning, design, forest management plan, and restoration)



A 25-acre opportunity for restoration

▪ Rejuvenation of the Rock Garden

The Rock Garden is a major horticultural attraction and a heavily used specialty collection next to the Native Plant Garden. Pathways and infrastructure will be upgraded and the collection will be enhanced by adding new varieties of plants. Planning and design as well as collections development would occur in this planning period. Major construction as well as endowment support are beyond the period covered by this plan.

Phase II 2019–2021: \$2,000,000 (planning, design, and collections development)



A potential four-season attraction

- **Restoration and Expansion of the Magnolia Collection**

The five-acre Magnolia Collection is on the tram tour in a high-profile section of the Garden. It will be enhanced through the redesign of circulation, signage, the introduction of an overlook, and the expansion of the Collection both in square footage and in the number of varieties represented. Planning and design as well as collections development would occur in this planning period. Major construction and endowment support are beyond the period covered by this plan.

Phase II 2019–2021: \$2,000,000 (planning, design, and collections development)



A beloved collection expanded and rejuvenated

- **Restoration of Daylily/Daffodil Walk**

Located in a highly trafficked area of the Garden between the Mertz Library and the Haupt Conservatory, Daylily/Daffodil Walk is in need of improvement and expansion. The planting beds will be made wider and run the full length of the Walk and new varieties of daylilies and daffodils will be added.

Phase II 2019–2021: \$200,000



New varieties, bigger planting beds, a more impressive spring and summer spectacle

CREATING A GREEN URBAN OASIS: INFRASTRUCTURE

▪ Infrastructure Renewal—Paving, Lighting, and Stormwater Management

Many paths and roadways in the Garden are simply worn out. There is also a related need for stormwater drainage to prevent the deterioration of the paving and unfiltered runoff flowing into the Bronx River. In addition, as more evening events are added to the Garden schedule, lighted pathways have become a necessity.

Phase I 2016–2018: \$1,975,641 (These funds have been raised; Conservatory Drive is in progress.)

Phase II 2019–2021: \$9,800,000 (for Garden Way, Azalea Way, etc.)



Permeable pavement instead of flooded roadways

CREATING A GREEN URBAN OASIS: VEHICLES

▪ New Tram Fleet

The tram fleet is essential to audience development and generating earned income. The tram tour is at the heart of the visitor experience. The existing fleet has outlived its useful life and must be replaced.

Phase I 2016–2018: \$1,971,000 (NYBG has requested this amount from the City.)



New trams for one million visitors

CONNECTING GARDENING TO THE ARTS AND HUMANITIES

▪ New Center for Continuing Education

We need to create an Education Center with a welcoming and “unified campus” that reflects NYBG’s prestige and caliber. It would include a cohesive identity, a redesign of the lobby, classroom upgrades and renovations and a 100-seat lecture hall. During this strategic plan, the planning and design for both short- and long-term needs, including a full building rehabilitation, would be completed as well as upgrades to classrooms. The full rehabilitation is not in the period covered by this plan.

Phase I 2016–2018: \$1,500,000 (planning and design)

Phase II 2019–2021: \$1,000,000 (classroom upgrades)



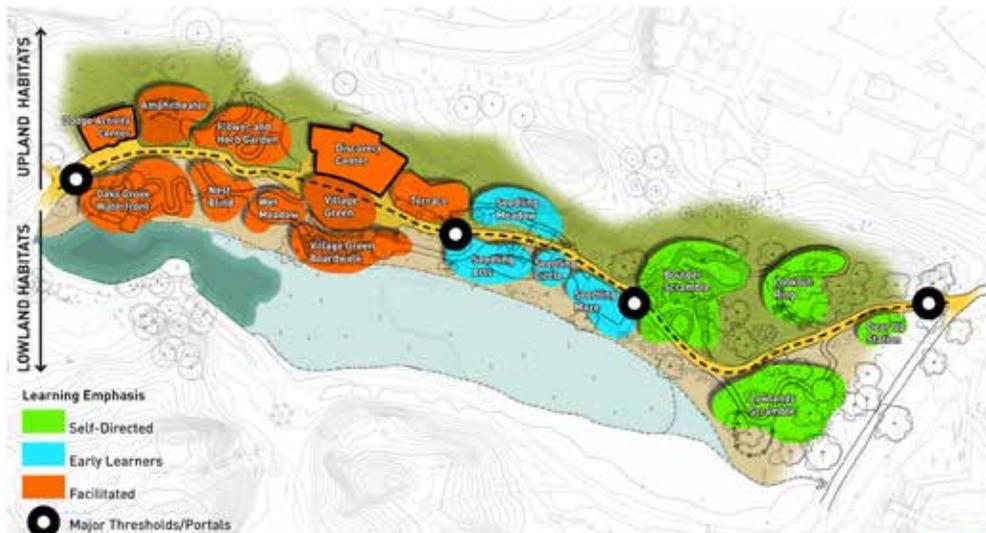
A cohesive, welcoming place for continuing education

TEACHING SCIENCE TO CITY KIDS

▪ Everett Children’s Adventure Garden Restoration

The Everett Children’s Adventure Garden is a major attraction and a central facility for educating school groups and teachers. It has been almost 20 years since it was constructed and it is in need of a rehabilitation. Aging exhibits will be redesigned and replaced, and facilities will be upgraded with new mechanical systems, a public restroom, reconfigured spaces, and refurbished finishes.

Phase I 2016–2018: \$4,899,000 (All funds are in hand from private and government sources.)



New exhibits, facilities, and activities

TEACHING SCIENCE TO CITY KIDS

▪ The Edible Academy

The Edible Academy and Ruth Rea Howell Family Garden enhancements will allow the Garden to offer Children's Education and Teacher Training programming year-round and to double the number of annual participants. The project is designed to be a new LEED Gold facility that includes two classrooms in a year-round facility with a greenhouse, pavilions, nursery, service yard, amphitheater, and tram stop.

Phase I 2016–2018: \$5,650,000 (\$4,125,669 is needed to complete funding for this project.)



LEED Gold facility with classrooms, greenhouse, amphitheater, and tram stop

▪ GreenSchool Renovation

The GreenSchool is located in the basement of the Haupt Conservatory, which was designed to be storage and horticulture work space. Proper GreenSchool classrooms include improvements to the physical space that will make them more appealing, more efficient for learning, and more adaptable to modern teaching technologies.

Phase II 2019–2021: \$1,500,000



Efficient, well-equipped learning environment

SAVING THE PLANTS OF THE WORLD

▪ Systems and Equipment

The Garden's Science programs require new, more advanced technology to support digitization; storage, backup, and retrieval of images and data; and analysis and presentation of research materials. Upgrades and additions include networking, storage and backup upgrades, digitization equipment, a cloud-based system for GIS and a Digital Asset Management System.

Phase I 2016–2018: \$1,901,127 (The main source of funding will be Federal research grants.)



Digitization equipment for sharing NYBG's scientific data

INSTITUTIONAL MATTERS

▪ Information Technology

The investment in the Garden's Information Technology program has not kept up with the rapid changes in technology. The Garden needs upgrades to the network and data storage and backup systems to support Garden-wide IT as well as new or enhanced systems for specific programs and business operations.

Phase I 2016–2018: \$2,024,359 (initial upgrades to the network and system replacements)

Phase II 2019–2021: \$1,375,641 (ongoing replacement of business systems)

Raised to Date: \$750,000



Networking and data storage equipment



125TH ANNIVERSARY CAPITAL PLAN 2016–2021

	Phase I 2016–2018	Phase II 2019–2021
Creating a Green Urban Oasis		
Conservatory Dome and Energy Project	\$15,000,000	\$ —
New Exhibition House		
Program and Business Planning	1,000,000	—
Architectural Planning and Design	—	4,000,000
Adaptive Reuse of Old Lab & Mosholu Gate		
Planning and Design	2,000,000	—
Construction	—	13,000,000
Lorillard Stable and Operations Compound		
Emergency Repairs	2,000,000	—
Planning and Design	—	2,000,000
New Tram Fleet	1,971,000	—
Infrastructure Renewal	1,975,641	9,800,000
Daylily/Daffodil Walk Restoration	—	200,000
Magnolia Collection Restoration and Expansion	—	2,000,000
South Forest Restoration	—	2,000,000
Rock Garden Rejuvenation	—	2,000,000
Connecting Gardening to the Arts and Humanities		
New Continuing Education Center		
Planning and Design	1,500,000	—
Classroom Upgrades	—	1,000,000
Teaching Science to City Kids		
ECAG Restoration	4,899,000	—
Edible Academy	5,650,000	—
GreenSchool Renovation	—	1,500,000
Saving the Plants of the World		
Systems and Equipment	1,901,127	—
Institutional Matters		
Information Technology	2,024,359	1,375,641
Total Capital Projects 2016–2021	\$39,921,127*	\$38,875,641

*As of April 30, 2016, \$17,619,972 has been raised toward the Phase I Total Capital Projects.



THE FIRST THREE YEARS:
125TH ANNIVERSARY FUND 2016–2018
(PHASE I OF 2016–2021 PLAN)



THE FIRST THREE YEARS:
 125TH ANNIVERSARY FUND 2016–2018
 (PHASE I OF 2016–2021 PLAN)

Operating Funds 2016–2018	Total Need
Fund for the Garden	\$ 54,022,975
Edible Academy Operating Fund	1,911,131
Government Funding for Science	5,999,476
Net Earned Income	5,145,291
Total Operating Funds	67,078,873
Capital Projects 2016–2018	39,921,127
Endowment 2016–2018	
New Pledges	16,500,000
New Cash Received	1,000,000
Edible Academy Endowment	500,000
Total Endowment	18,000,000
Total 2016–2018	\$125,000,000*

*As of April 30, 2016, \$38,503,072 has been raised toward all Phase I Operating, Capital, and Endowment Needs.

For more information, contact:

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