Company Overview

The New York Botanical Garden has been a connective hub among people, plants, and the planet since 1891. We're rooted in the cultural fabric of New York City, here in the heart of the Bronx—its greenest borough. For more than 130 years, we've invited millions of visitors to make the Garden a part of their lives, exploring the joy, beauty, and respite of nature. NYBG's 250 acres are home to renowned exhibitions, immersive botanical experiences, art and music, and events with some of the most influential figures in plant and fungal science, horticulture, and the humanities. We're also stewards of globally significant research collections, from the LuEsther T. Mertz Library collection to the plant and fungal specimens in the William and Lynda Steere Herbarium, the largest such collection in the Western Hemisphere.

At NYBG, we're plant people—dedicated horticulturists, enthusiastic educators, and scientific adventurers—committed to helping nature thrive so that humanity can thrive. We believe in our ability to make things better, teaching tens of thousands of kids and families each year about the importance of safeguarding our environment and healthy eating. Our expert scientists work across the city, the nation, and the globe to document the plants and fungi of our world—and find actionable, nature-based solutions to our planet's dual climate and biodiversity crises. And our eyes are always looking forward as we train the next generation of botanists, gardeners, landscape designers, and environmental stewards, ensuring a green future for all. At NYBG, we know that it's nature—or nowhere.

Launched in 2023, the Urban Conservation Program at NYBG focuses on the potential of nature-based solutions in cities to address the impacts of climate change and biodiversity loss. Grounded in 25 years of research into maps, texts, and environmental data by Dr. Eric W. Sanderson and colleagues, we use historical ecology as a tool to reimagine New York City's future—one that supports both ecological systems and human communities. Through ecological democracy, environmental governance, and active restoration, we place our data in the public's hands via web tools, publications, and exhibitions. We believe that with the right tools, and with the right plants, New Yorkers can lead the way to a more resilient, just, and biodiverse city.

Project Overview

The **Mannahatta Project** and its five-borough extension, the **Welikia Project,** are award-winning contributions to the story of New York. The project provides accessible, detailed, spatially-explicit resources for understanding the ecological history of the city. We share this information in a variety of media through websites, publications, exhibitions, and public programing. At The New York Botanical Garden, we are working to highlight the dramatic changes New York City has undergone in the past 400 years and inspire new visions for the future of nature in the city.

From the Welikia Project, we have developed detailed geographic descriptions of the geographic distributions of approximately 2400 ecosystem elements on September 12, 1609 using a 10x10 meter grid (see welikia.org). For any given grid cell, we can provide a species list of flora and fauna; distance to waterbodies including springs, rivers, creeks, ponds, and shorelines; frequence of disturbance, and lists of most likely ecosystem types, such as oak-tulip tree forest, freshwater marsh, salt scrub, and blueberry heath. Taxa include the most likely

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plants, fish, reptiles, amphibians, birds, and mammals (approximately 1,800 species). We have also mapped the distribution of Indigenous Lenape sites and putative trails. See Eric Sanderson's Mannahatta: A Natural History of New York City (chapter 6 and Appendix C) for methodological explanation and list of species.

For use in exhibitions, presentations, and websites, NYBG's Urban Conservation Program seeks a partner to develop a method and demonstration for systematically creating soundscapes based on the landscape ecology of specific locations in the landscape that became New York City.

Statement of work

Selected individuals, teams, institutions, or companies will be responsible to work with NYBG's urban conservation team led by Dr. Eric Sanderson for the following:

- Method for systematic production of natural soundscape tied to specific localities for use in museum and pop-up exhibition settings to accompany of short films, presentations, web tools, and free-standing applications
    - Written description of the method including
        - Recommended software, including existing packages and new computer code
        - Recommended hardware to create soundscape files and to play them in exhibition setting, auditorium, and headphones
        - Description of pipeline to produce sound files using sound assets and Welikia project data
        - Description of how to generate arbitrarily long sound experiences (e.g. looping, randomization, etc.)
        - Description of how to mix soundscapes geographically and temporally (e.g. across ecosystem types and different times of day)
    - A license for NYBG to use and adapt the method to produce soundscapes
- Sound beds of background sound for 7 different ecosystem types (specifically, forest, grassland/meadow, tidal wetland, freshwater wetland/pond, beach/dune, Lenape site, the harbor) at 4 different times of day (dawn, mid-day, dusk, midnight).
    - Note some soundbeds may be redundant (i.e. less than 28 may be required; pls specify what is needed / possible given funds available)
- Creation of a royalty-free sound library of discrete sounds to be mixed in with the sound beds representing different aspects of the historical natural environment,
    - Discrete cleaned sound files for selected species, sufficient to generate realistic soundscapes in various ecosystem types (see list of royalty-free sources for sound files below)
    - Other discrete sounds as needed to represent weather conditions (e.g. rain, thunder, wind) and/or human presence
    - Note NYBG can provide access to sound files of spoken Lenape Munsee from contemporary Lenape speaker
    - Note Appendix to this RFP with a starting list of royalty-free sound libraries
- Using the method and assets above, develop 3 "proof-of-concept" spatial audio files of at least 20 minutes duration of soundscapes for selected NYC locations and different times of day based on the Welikia Project data (sites to be selected jointly between NYBG and project team), for example:
    - Forest (e.g. Times Square, Downtown Brooklyn)
    - Grassland/Meadow (e.g. Harlem Plains, Hempstead Plains)

    - Tidal Wetland (e.g. Jamaica Bay, Brooklyn Navy Yard, South Bronx, Flushing Meadows)
    - Freshwater Wetland/Pond (e.g. Collect Pond/Foley Square, Trains Meadow/Jackson Heights, Bear Swamp/Pelham Parkway)
    - Beach / Dune (e.g. Coney Island, South Shore of Staten Island)
    - Lenape Site (e.g. Clason Point, Inwood, Ward's Point)
    - Harbor (e.g. East River, New York Harbor, Long Island Sound)
- A license for NYBG to use the soundscape files in exhibition, presentation, and online with appropriate credits to the soundscape individual/team)

Requirements and Expectations

- Experience with natural soundscapes, especially in the Northeast USA
- Experience with surround sound mixing
- Experience with audio editing and compositing
    - Removal of anthropogenic ambient sound (human voices, ground and air traffic noises etc.) and non-representative wildlife sounds (introduced bird species, dogs etc.)
    - Sampling of wildlife calls and other sounds from existing libraries
    - Mixing transitions for time-of-day and geographic shifts
    - Ability to create seamless audio loops, to extend playtime of shorter sections if needed
- Experience with algorithms based on geographic data
    - NYBG can provide assistance on the geospatial data handling and programming as needed
    - Experience with on-site field recording of natural environments, and ability to work in remote areas, under a range of weather conditions.
    - Experience location scouting for environmental audio including binaural recording and mixing
        - NYBG can provide recommendations for locations with representative habitat
- A commitment to conservation, a love of New York, and a collegial and collaborative approach
    - Availability for future work, if this contract is successful

Budget

$20,000 (paid in installments over course of the project)

Timeline

June – December 2025 (contract to be signed before June 30, 2025)

How to Respond to this RFP

This request for proposals was issued on May 12, 2025 at Urban Conservation | New York Botanical Garden

Questions can be submitted by email to **urbanconservation@nybg.org** by 5 pm on May 23, 2025.

Written responses to questions will be posted on the website above by 5 pm on May 30, 2025.

Written proposals are due by 5 pm on June 6, 2025 by email to **urbanconservation@nybg.org**

Responses are limited to 5 pages. Responses should address these five questions:

- **How will you do it?** A conceptual description of how the method, sound library, and proof-of-concept files will be produced
- **Why are you the best person/people to do it?** A description of the individual / team including a brief account of relevant experience, training, and background. If a team, briefly describe roles and responsibilities with respect to this project.
    - An appendix with resumes/cv's of key team members. This appendix is not counted in the page limit for the response.
- **What have you done before?** A brief description of 1- 3 similar projects done previously (with links to online materials/examples)
- **How will you spend the allocated funds?** Brief budget justification and suggested payment schedule.
- **How will you deliver the work?** Provide a timeline with major deliverables between July 1 – December 1, 2025. Include expected consultation times with NYBG urban conservation team.

Online interviews with leading candidate teams will be held the week of June 9 – 13, 2025.

We expect to make a final decision by June 16 and have a signed contract by June 30, 2025.