



Session 1.2

Barefoot in the Park: How
contact with nature can affect
our health and wellbeing

Chair: Thomas Hofer



**World Forum on
Urban Forests**



2nd World Forum on Urban Forests

Washington DC, 2023

Barefoot in the Park: How contact with nature can affect our health and wellbeing.

Creative Community Engagement Strategies for Green Infrastructure Projects



Presented by

Matthew López-Jensen

Environmental Artist & Educator

(The New School & Fordham University)





**2nd World Forum on
Urban Forests**

Washington DC, 2023

THANK YOU!

World Forum on Urban Forests

The New York City Urban Field Station

The Nature of Cities (TNOC)

The New School

Everyone who selected this session!





The environmental arts course I created and teach at Fordham University.

Pitch In to Pick Up!

Join us every week to help clean up Starlight Park and prevent litter from entering the Bronx River!

Volunteer with us!

Bronx River
Greenway



Bronx River Greenway

**Come
explore the**

Volunteer With Us

**Meet
some
new
friends.**

Community Partner



The course is anchored in the history of community activism.



This is the Bronx!



Student work, Plant ID cards, donated to the Bronx River Alliance for use by educators



Student work, textile maps donated to the Bronx River Alliance for use by educators



Student work, textile maps donated to the Bronx River Alliance for use by educators



Student work, bottle cap "snake" made from caps removed from park, donated to the Bronx River Alliance for use by educators

THE NEW SCHOOL

COURSE CATALOG

PSAM
2891

IMAGE, ACTION, & ENVIRONMENT

PARSONS SCHOOL OF DESIGN: ART, MEDIA &
TECHNOLOGY

IMAGE, ACTION, & ENVIRONMENT FALL 2022

TAUGHT BY: MATTHEW LÓPEZ-JENSEN

SECTION: A

CRN: 14664

Credits: 3

This course is designed around direct experience with New York City coastlines, parks, and community gardens. Students will use their creative, social media, and photography skills as advocacy tools for sites of their choosing and to further ecological and environmental justice initiatives. Students will also experiment with care-centric actions such as planting, cleaning, fixing, maintaining, and other activities that are now extensions of contemporary art practices. This course celebrates blurring lines between art-making and activism. Throughout the semester we will visit and photograph a range of sites and meet with the community stewards and non-profit organizations charged with maintaining and protecting these spaces. We will learn about environmental and commercial threats facing these places and create work that advocates for change. We will acknowledge and explore Indigenous histories of the landscape and how these relate to current land management conflicts and contemporary art practices. We will also explore artists whose work combines social practice, activism, and environmental action.

Open to: All University undergraduate students. Successful completion of first year



Historic community garden action in the South Bronx

The environmental arts course I created and teach at The New School.



Assignment 1

Plant a tree.

Make it art.

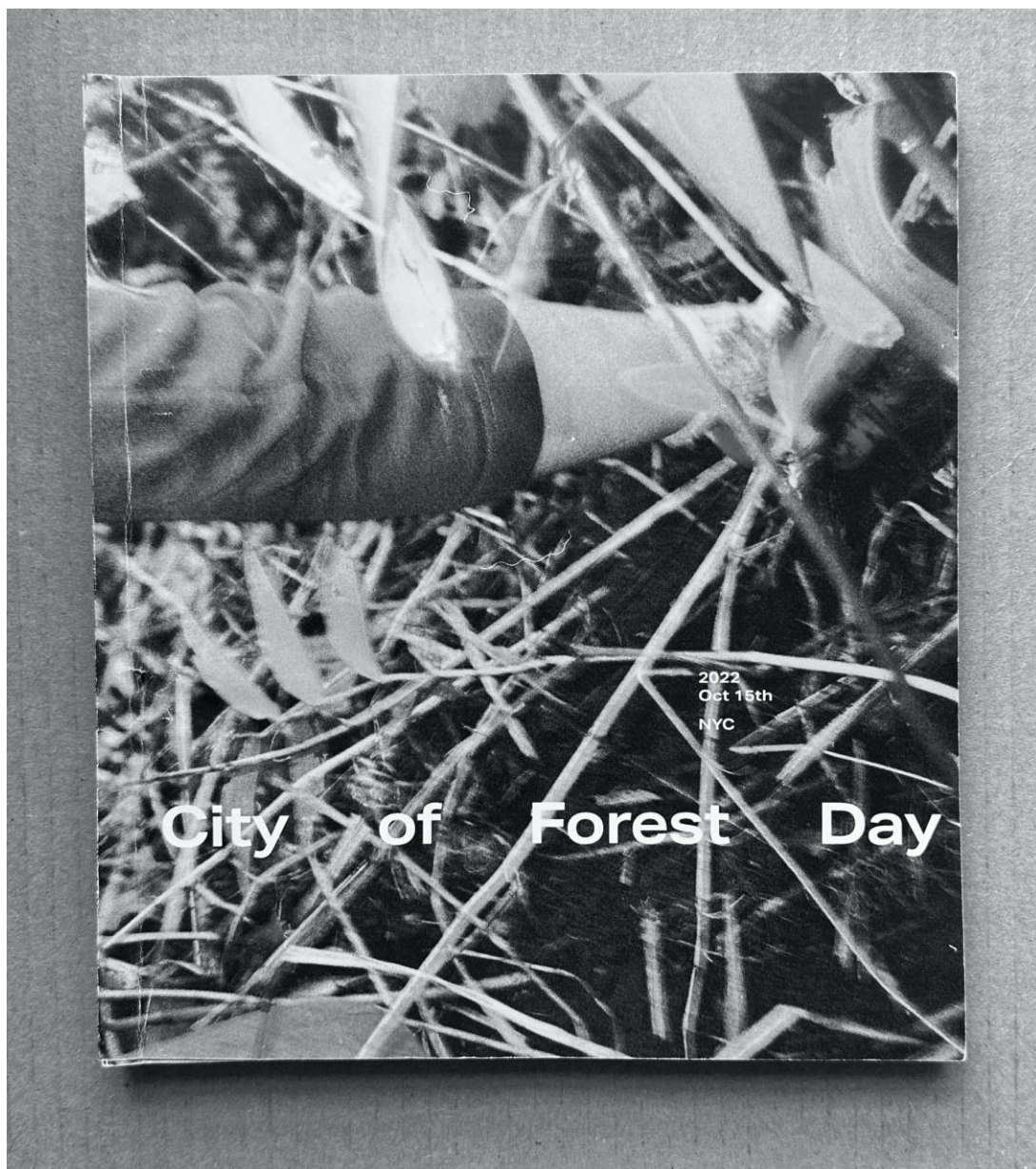


[City of Forest Day](#)[NYC Urban Forest Agenda](#)[Coalition](#)[News](#)[Resources](#)[Join Us!](#)

Join us **Saturday, October 14, 2023** for the second annual City of Forest Day! After a successful inaugural City of Forest Day last year, we are thrilled that this citywide celebration of the urban forest will take place again this fall. Presented by Forest for All NYC in partnership with the Parks and Open Space Partners – NYC Coalition and NYC Parks, City of Forest Day is an annual day of activities across the city to raise awareness of the importance of the New York City urban forest, and the essential role New Yorkers play every day in caring for the “lungs” of our city.



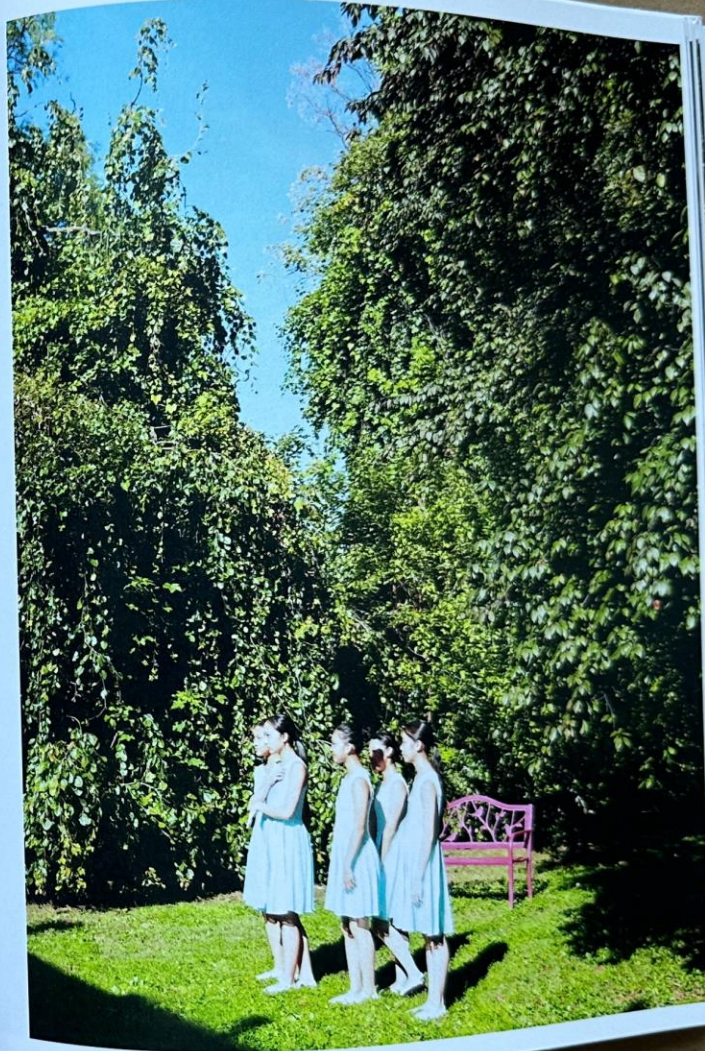
Student work from City of Forest Day
(pictures of stewardship)



City of Forest Day Magazine: Issue 1

Delancy Mai

It was my first time
attending a birthday
party of a tree, it was
fun and exciting.



THE ERIE CANAL

Artist-in-Residence



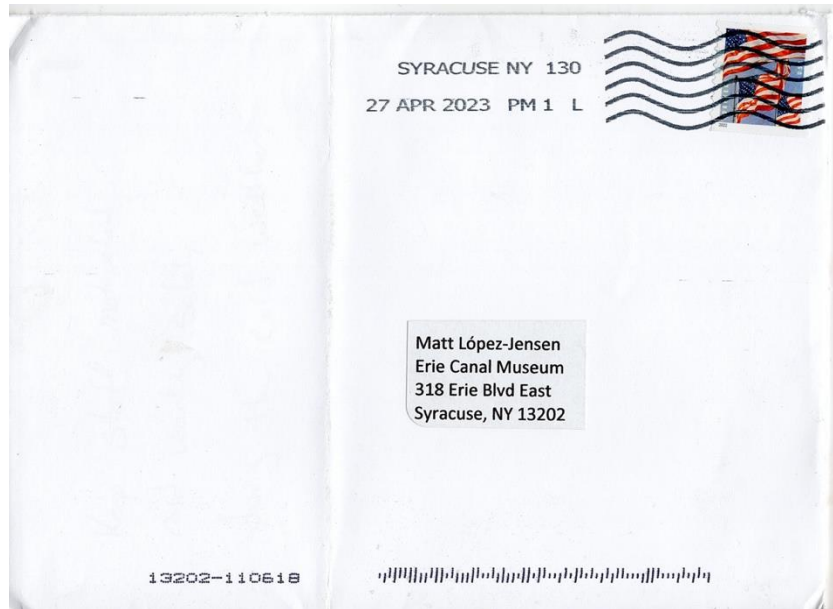


Participation and Engagement

Employees who work in the field throughout the system were mailed a personal call for participation. Each letter contained a thank you note, photo postcard, hand-decorated cards for participation, and a stamped return envelope.

This is the first time canal employees have interacted with an artist-in-residence in the 200-year history of the system. The contributed texts will define the finished series of works. They will also remain in the archive at the Erie Canal Museum.

The idea is to create a series that recognizes the off-season work and the unseen labor that makes this recreational corridor function.



THE WORK AND THE WATER

Name: *Steve Thoup*
(optional)

Site/Location/Lock: *Lysander*
(optional)

Question 1:

Describe one of the more challenging tasks you do during non-nav season?

(Use the other side of the card)

IN The FALL we Remove
Heavy electrical equipment FROM
CABINETS. We move it TO our
ON SITE work Shop where we
dis ASSEMBLE inspect and Re FINISH IT
BEFORE Reassembly. Then Reinstalled
IN CABINETS BEFORE NAVIGATION
Season.

DEGREASING

GEARS

The reason we do tree
Maintenance is not just for
Looks. It Prevents dam Failures
and Blockages important for water
Level control

OPENING VALVES TO
ALLOW THE GATES TO OPEN.

H_2O IS EXTREMELY STRONG.

THE GATES WILL WAVER WHEN

THE H_2O HAS GOTTEN INTO

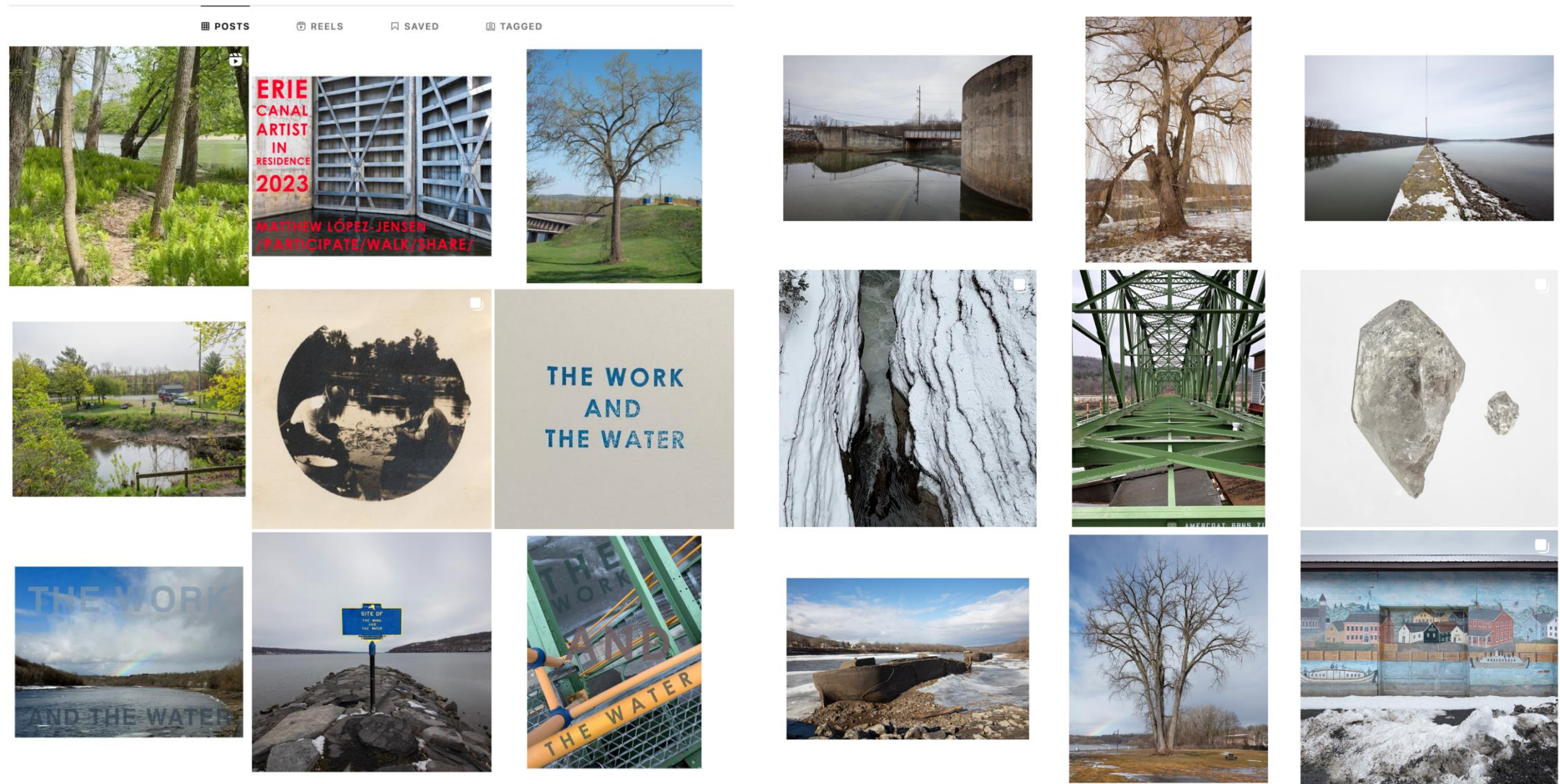
EQUILIBRIUM. VERY COOL.

SPECTATORS ARE VERY IMPRESSED.





OPENING VALVES TO ALLOW
THE GATES TO OPEN.
H₂O IS EXTREMELY STRONG.
THE GATES WILL WAVER
WHEN THE H₂O
HAS GOTTEN INTO
EQUILIBRIUM



Instagram @all524miles

“Remember when we...”

vs

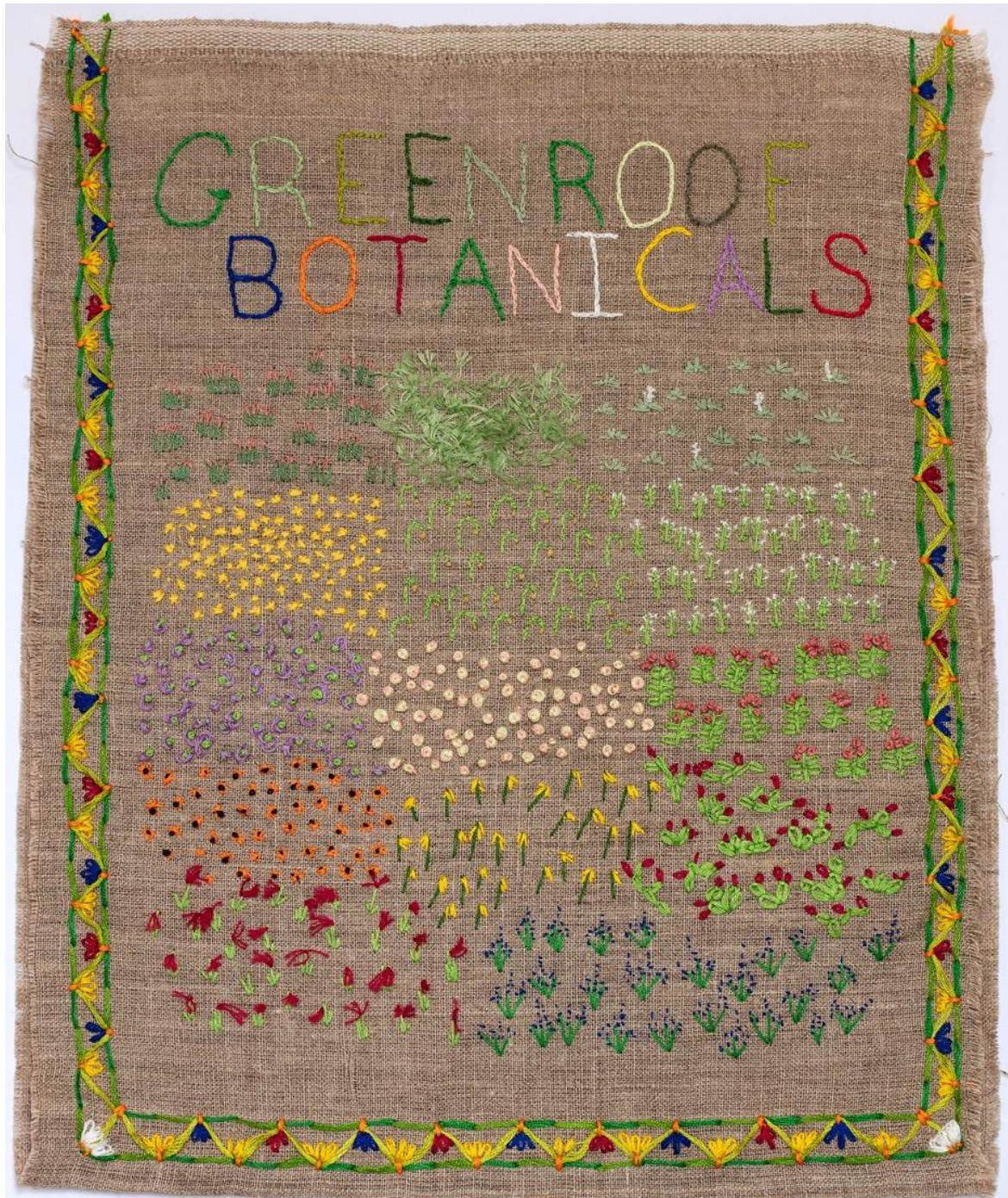
“Remember when they...”

--- Someone in a community somewhere

Project 1: The Tibbetts Estuary Tapestry

A community-embroidered map and provocation in the Northwest Bronx

- Storm water management
- Historic waterways
- Combined sewer overflow
- Green roofs
- Heat island effect
- Pedestrian access
- Native flora



The Tibbetts Estuary Tapestry

Matthew López-Jensen

and

Ana de la Cueva

Stop 1: Tibbetts Brook Park, Yonkers

Alosa pseudoharengus, a river herring (Alosa) or shad, or false sea herring (pseudoharengus), once swam up this spot where people on the bridge now look down. Also known as ale-wife, elwife, elwop, or the gaspereau or klack in Canada, it plated Tibbetts Brook with moving quicksilver this time of year. The ale-wife is named for its fat head reminiscent of a corpulent inn-keeper's wife. These fish predated the bridge, and the lake which the bridge impounds. They also predate the appellation Tibbetts's Brook, named after George Tippet and/or his father-in-law, William Betts. These fish are older and more noble than the original Jonker, or patroon, Adrian van der Donck, for whom the City of Yonkers was named, and by extension the Yonkers River, another name for Tibbetts Brook suggesting the stream's extension north. These fish, with their bulbous eyes and shiny scales, are as a species older even than Moshola, the indigenous Lenape name for the stream, village, and valley in which we stand. For ten thousand years or more, ale-wife swam by this spot, until this bridge, picturesque as it is, was dammed in the year of our Lord 1700. Hated but not forgotten, diminished but not extinct, the shad wait and hope. Each spring, even as we look on now, the shad bush Amelanchier canadensis remembers, flowering white in anticipation of the day this stream will run silver once again. -Eric Sanderson

Stop 2: Tibbetts Marshland

Spartina alterniflora, the smooth cordgrass, invokes in it's name the ties that bind (from the Greek, spartēnē, for rope or cord). Its alternating grey-green leaves, climbing a tall stiff stalk, once filled the future Tibbetts Park. The path of the Major Deegan Expressway and its green, walled-in verge, mark the low place, where tides would creep up twice per day from the Harlem River and wash the grassy sward. *Spartina alterniflora*, and its community members, endure not only flooding, but flooding by salt water, requiring two-fold special adaptations. They need mechanisms to pump oxygen from the sky to its deep roots plumbing anaerobic soils, and they need means to pump out the salt that would otherwise intrude on its cellular metabolism. Imagine running your hand along the grass leaves which once grew here so abundantly and bringing them to your lips to taste the crystalline salt. One would think that these double burdens of the environment imposed on the unlucky plant would curse the *Spartina*, but in fact they are its greatest blessings, for they keep out interlopers and allow *Spartina* to grow thick and deep. Few other plants or animals can withstand the rigors of the low salt marsh. Hence our forefathers and ancestral mothers filled in the marsh, built a train track, and then a super highway here. As others cruise on to errands far away, ignorant of the park-to-be on its western margin, let us remember, as we stand here enduring the din, that it is precisely within conditions of limitation that nature expresses its greatest creativity. Necessity is the mother of invention, and this will once again restore Tibbetts's Brook. -Eric Sanderson

Stop 3: 215th Street Station

In order for the daylighting of Tibbetts Brook to succeed, the City must first purchase the required properties. Acquisition of property rights or easements that would be required are under review and discussions with relevant property owners are on-going. The Tibbetts Brook would start to be above ground ("Daylighted") near Van Cortlandt Park South and would follow along on the CSX property between Broadway and the Major Deegan Expressway. The brook would then have to go below ground under a section of railroad still in use, potentially connect to the existing outfall, and empty out into the Harlem River. From the River Plaza mall parking structure, you can see the decommissioned railroad tracks now being used to store train cars. Unfortunately, there is a lot of trash piling up in this area. Coordinating between all the different parties and building an underground pipe in this section would be a major undertaking but as DEP, we are looking forward to this challenge and successfully daylighting the Tibbetts Brook. -Pinar Balci & Tolga Yilmaz, NYCDEP

Stop 4: Van Cortlandt Spillway

Tibbetts Brook originates in Yonkers and flows through Van Cortlandt Park before discharging into Van Cortlandt Lake. Since the early 1900s, the stream has been diverted from Van Cortlandt Lake through an 8 feet diameter tunnel that connects to a combined sewer flowing to the Waterside Wastewater Treatment Plant. During wet-weather, overflow from the combined sewer discharges to the Harlem River at an outfall near the abandoned Kingsbridge Substation, which is one of the largest Combined Sewer Overflow (CSO) discharge points in New York City. The proposed Van Cortlandt Lake Improvements and daylighting of Tibbetts Brook would substantially reduce this CSO discharge to the Harlem River. -Pinar Balci & Tolga Yilmaz, NYCDEP

Walking Tibbetts, Interactive web-based map, video, photography, essay, 2021



Tibbetts Brook, as glimpsed from within the fenced off, inaccessible, eco-nightmare that is the golf course.



The last we see of Tibbetts...until the floods.




Pictures I took on the way to get groceries one day when we were making international news.





Why New York Is Unearthing a Brook It Buried a Century Ago

A plan to “daylight” Tibbetts Brook in the Bronx would be one of the city’s most ambitious green infrastructure improvements.

 Share full article



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A bit of land along the highway where the future daylighted stream and pedestrian corridor will go/flow.

New York City took the Tibbetts estuary and marshland, filled it in, sold it off, and built on top of it.

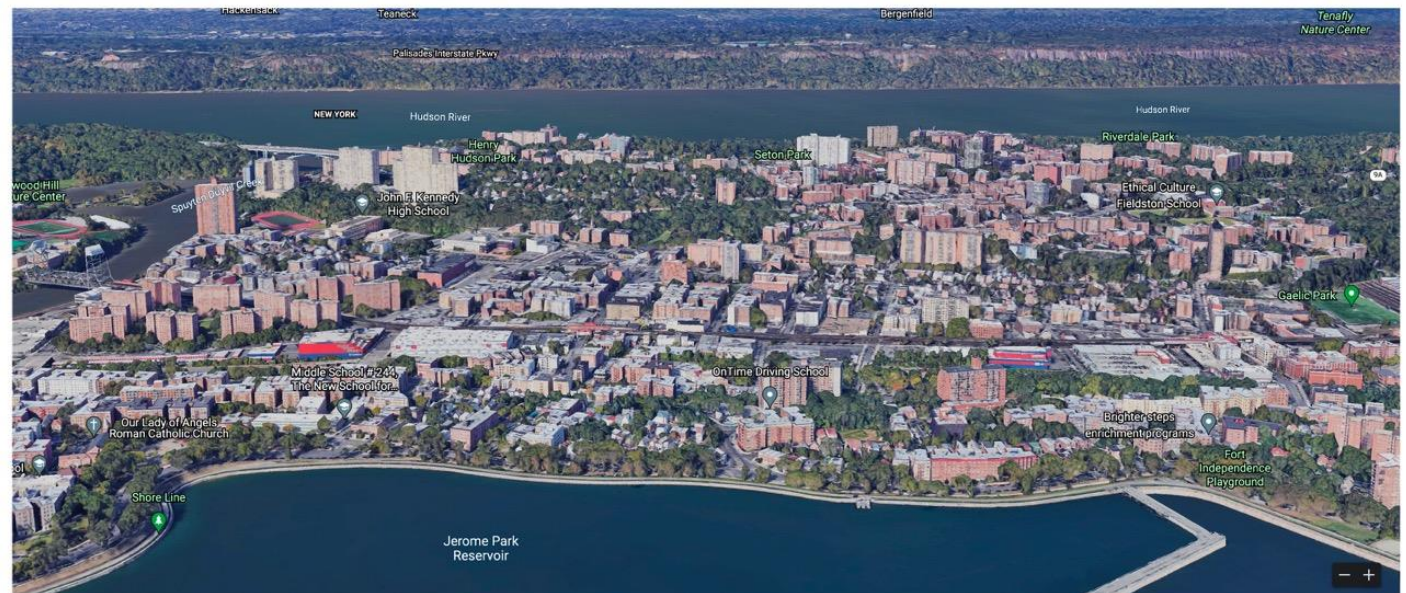
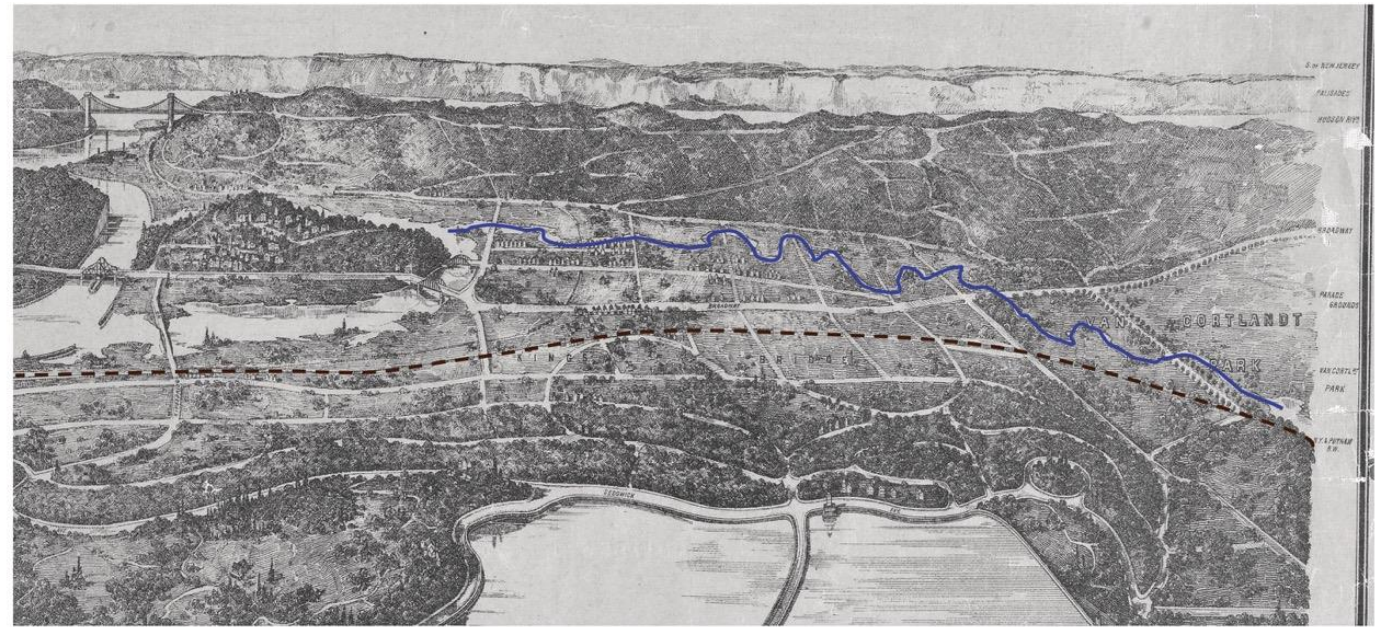
Acres and acres of big box stores with big flat rooves, parking lots, storage units, schools, and not a green roof in sight!

Daylighting Tibbetts is a great start but the real transformation, the real community benefits, will come from green roofs.

NYC should not hide behind regulations and code that can be circumnavigated.

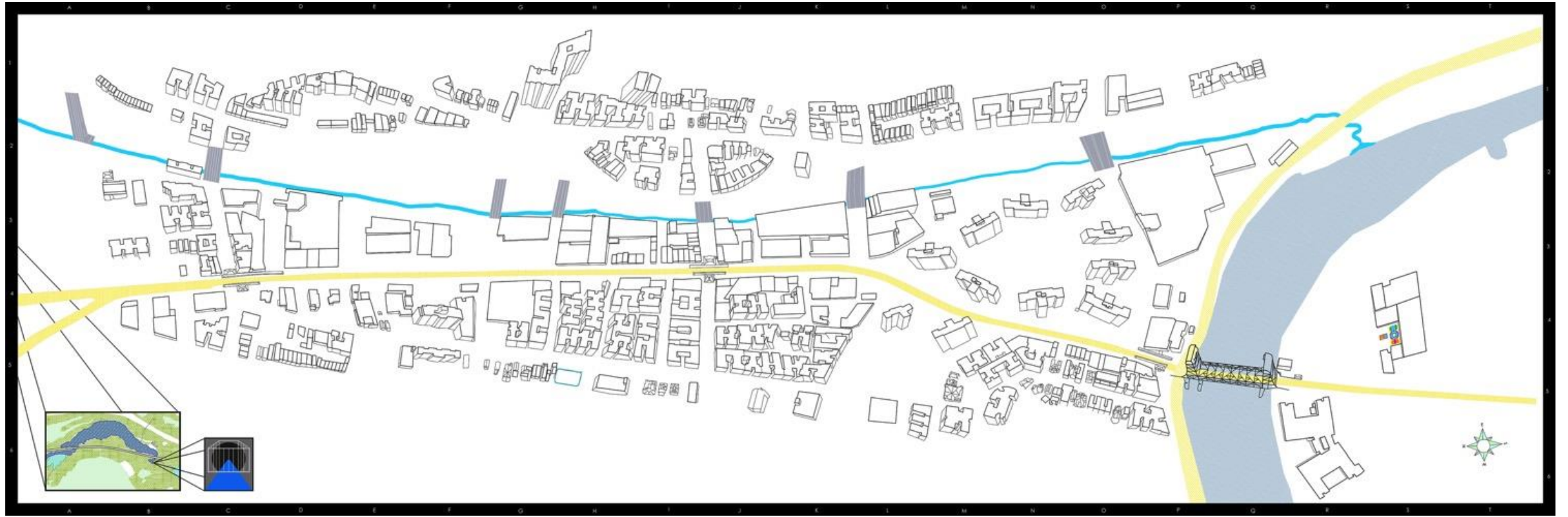
NYC should install the green roofs.

It's cheaper than flood damage and cheaper than an expanded sewer treatment plant.





The former marshland today



Turned into a map

What is a “green roof” and how can it help? This project answers these question using thread.





100 copies, ledger paper, all layers with trees.jpg



A1 With Trees.jpg



A2 With Trees.jpg



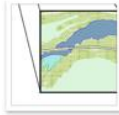
A3 With Trees.jpg



A4 With Trees.jpg



A5 With Trees.jpg



A6 With Trees.jpg



B1 With Trees.jpg



B2 With Trees.jpg



B3 With Trees.jpg



B4 With Trees.jpg



B5 With Trees.jpg



B6 With Trees.jpg



C1 With Trees.jpg



C2 With Trees.jpg



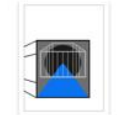
C3 With Trees.jpg



C4 With Trees.jpg



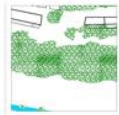
C5 With Trees.jpg



C6 With Trees.jpg



D1 With Trees.jpg



D2 With Trees.jpg



D3 With Trees.jpg



D4 With Trees.jpg



D5 With Trees.jpg



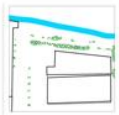
D6 With Trees.jpg



E1 With Trees.jpg



E2 With Trees.jpg



E3 With Trees.jpg



E4 With Trees.jpg



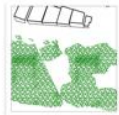
E5 With Trees.jpg



E6 With Trees.jpg



F1 With Trees.jpg



F2 With Trees.jpg



F3 With Trees.jpg



F4 With Trees.jpg



F5 With Trees.jpg



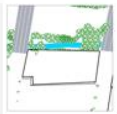
F6 With Trees.jpg



G1 With Trees.jpg



G2 With Trees.jpg



G3 With Trees.jpg



G4 With Trees.jpg



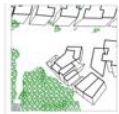
G5 With Trees.jpg



G6 With Trees.jpg



H1 With Trees.jpg



H2 With Trees.jpg



H3 With Trees.jpg



H4 With Trees.jpg



H5 With Trees.jpg



H6 With Trees.jpg



I1 With Trees.jpg



I2 With Trees.jpg



I3 With Trees.jpg



I4 With Trees.jpg



I5 With Trees.jpg



I6 With Trees.jpg



J1 With Trees.jpg



J2 With Trees.jpg



J3 With Trees.jpg



J4 With Trees.jpg



J5 With Trees.jpg



J6 With Trees.jpg



K1 With Trees.jpg



K2 With Trees.jpg



K3 With Trees.jpg



K4 With Trees.jpg



K5 With Trees.jpg



K6 With Trees.jpg



L1 With Trees.jpg



L2 With Trees.jpg



L3 With Trees.jpg



L4 With Trees.jpg



L5 With Trees.jpg



L6 With Trees.jpg



M1 With Trees.jpg



M2 With Trees.jpg



M3 With Trees.jpg



M4 With Trees.jpg



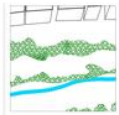
M5 With Trees.jpg



M6 With Trees.jpg



N1 With Trees.jpg



N2 With Trees.jpg



N3 With Trees.jpg



N4 With Trees.jpg



N5 With Trees.jpg



N6 With Trees.jpg



O1 With Trees.jpg



O2 With Trees.jpg



O3 With Trees.jpg



O4 With Trees.jpg



O5 With Trees.jpg



O6 With Trees.jpg



Map fragments turned into machine-embroidered tiles for participants to embroider.



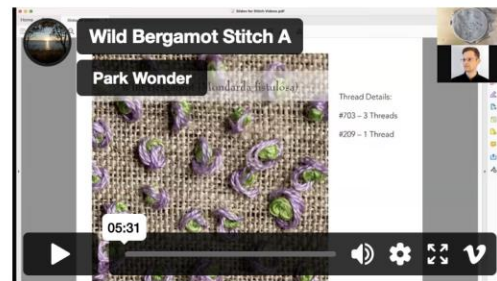
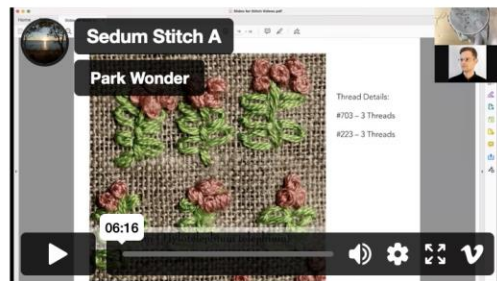
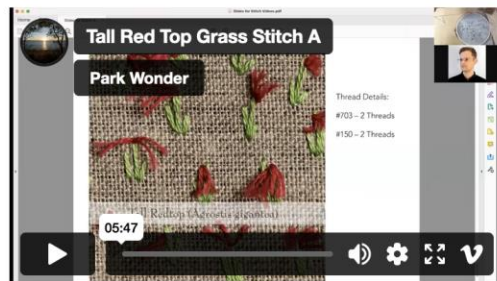
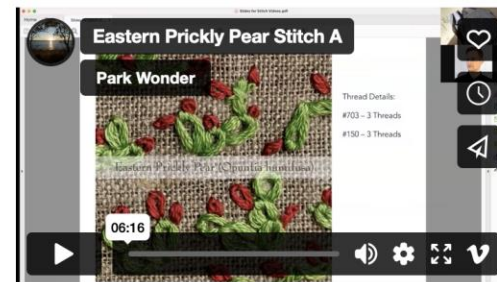
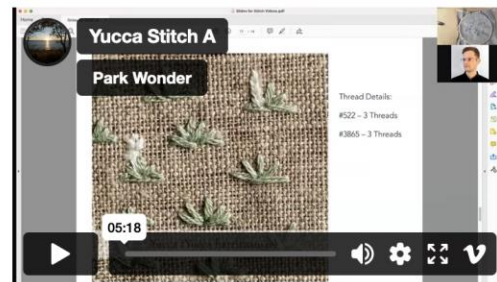
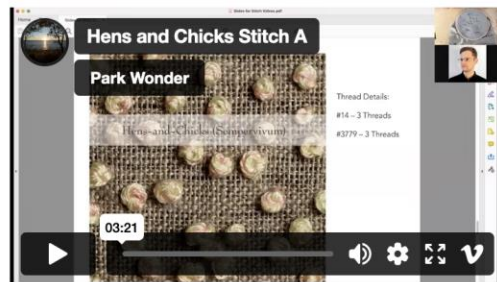
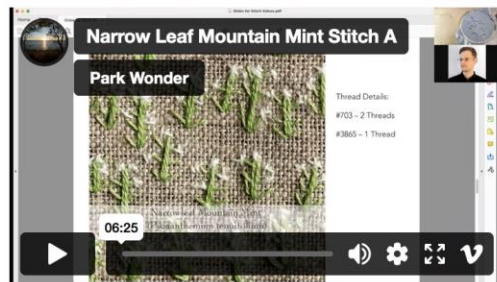
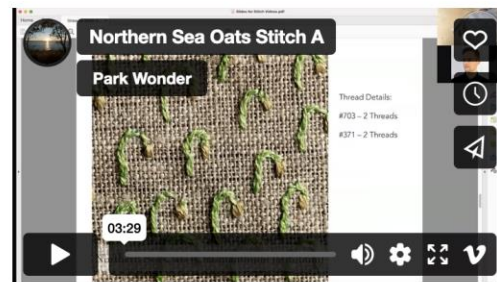
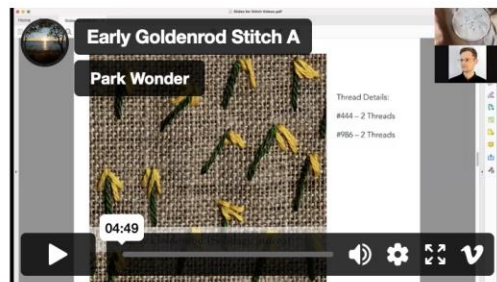
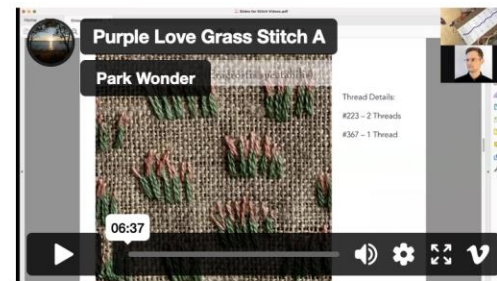
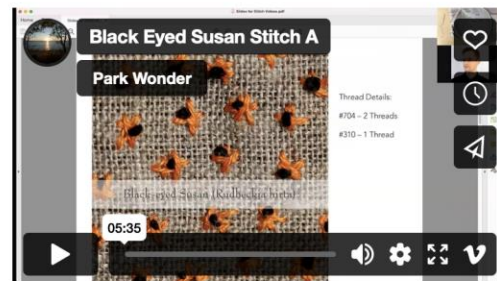
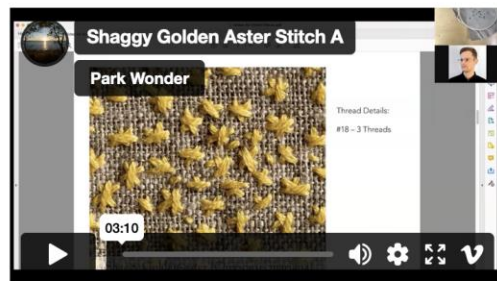
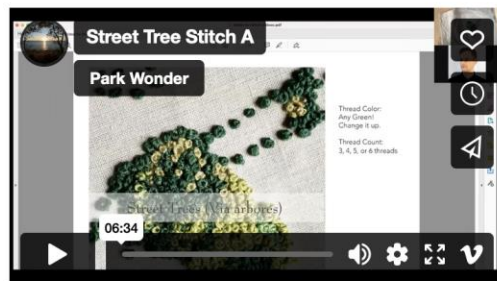
Eastern Prickly Pear (*Opuntia humifusa*)



Early Goldenrod (*Solidago juncea*)

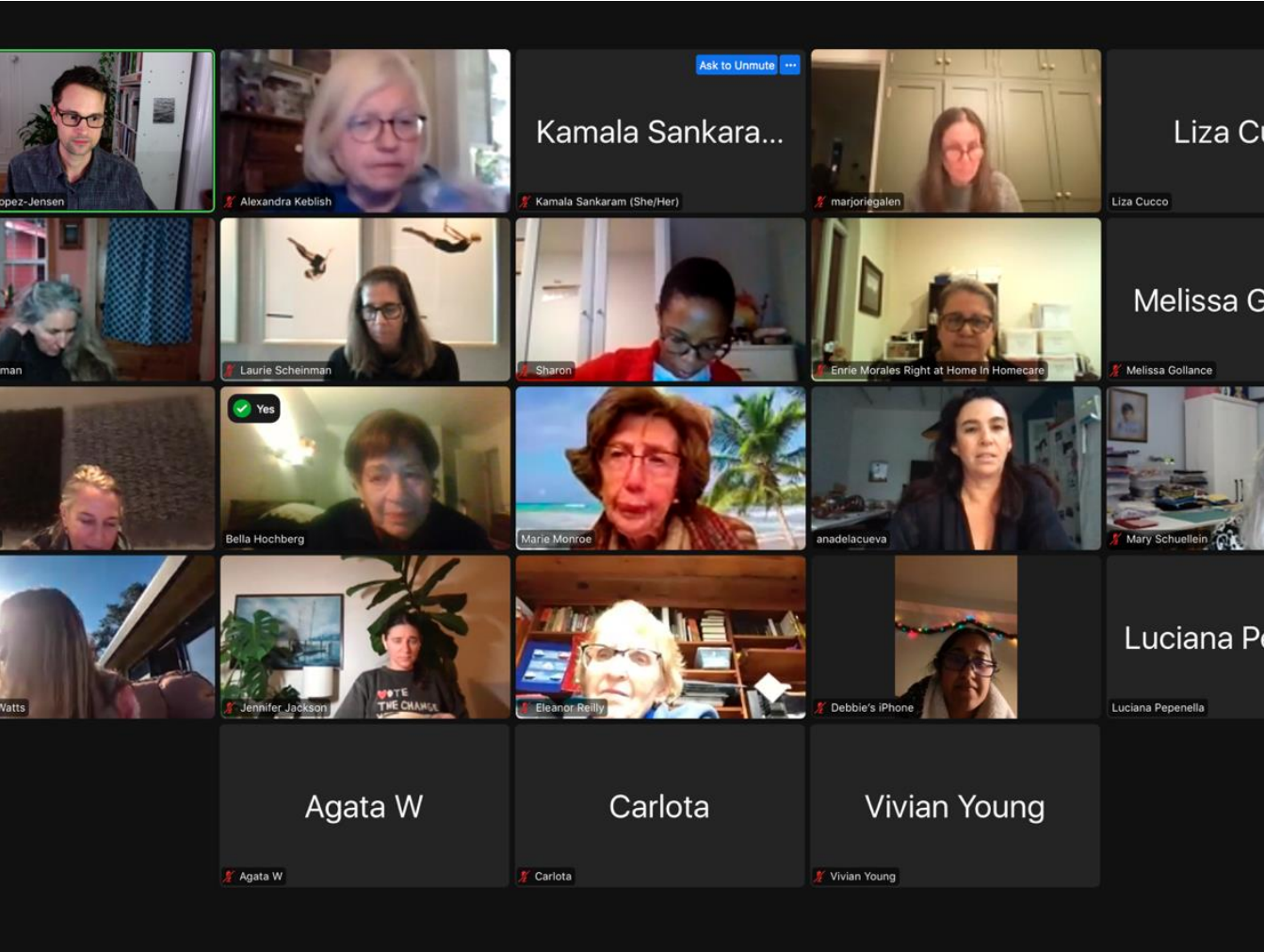


A few of the 15 plant stitches I created for the projects.





Teaching embroidery at the farmers market



Zoom calls with volunteers and a bilingual how-to website for teaching.

The Tibbetts Estuary Tapestry

A Community Embroidery Artist Project

WITH ARTISTS ANA DE LA CRUZ AND MATTHEW LOPICZ-JENSEN

The Tibbetts Estuary Tapestry Project imagines green roofs on all of the buildings along Broadway that were built on former wetlands.

It is a map of the possible. It suggests an answer to the urgent question: what do we do with all of this water?

Those living in the Northwest Bronx are familiar with the big box stores along Broadway: the Target, Best Buy, Aldi, Walgreens, Stop & Shop, and dozens of other commercial spaces from the Harlem River to Van Cortlandt Park. The buildings are huge and flat and they were built on land that was once a rich tidal estuary. The Tibbetts Estuary. When the subway was extended this far north the cranes from this platform were mostly of scrap metal. Now it is mostly rooftops. And now flooding is a huge problem. But what if there was a coordinated effort to create a living collection of continuous green roofs? It would cool the neighborhood, ease the air pollution burden for plants, insects, and birds, and mitigate flooding events for generations. And it would be beautiful.

Learn all about the project from Ana and Matthew in the video to the left.

Ana & Matthew introduce the project | Ana & Matthew present at project

How can I get involved?

Artists Matthew Lopicz-Jensen and Ana de la Cruz have designed this public art project to imagine the possibilities of green roofs with Bronx. The Tibbetts Tapestry will be fifteen feet long and six feet tall and composed of 120 tiles. As a participant you will receive one of those tiles to embroider, hand-stitch, and even frame. When your tile is complete it will be exhibited together with all the others to create the final Tapestry. It's easier than it sounds.

No experience with embroidery is necessary and perfection is not expected! Learning how to embroider is part of the experience.

Once you sign up there you will receive a Tibbetts Kit in the mail or you can pick one up at an in-person event. (See event schedule below.)

Each kit will include two pieces of linen, one to practice and one that is a section of the neighborhood map with outlines for you to embroider a garden. The kit will include: needles, a hoop, embroidery thread, and instructions. The prints have created how-to videos for the project and for many stitches. These can be found below.

And our team can walk you through every step if you get stuck.

You can request an embroidery kit to be sent to you in the mail and follow the online videos and events to learn more, or you can pick up the kit from one of our outdoor public events at collection locations in the Kingsbridge area.

[TO SIGN UP CLICK HERE](#)

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This project shows a section of Tibbetts Street, embroidered on linen.

Attend an event, online or in-person

Throughout September, October and November, we'll be having a few virtual and outdoor in-person events where you can embroider with others and learn a bit more about Tibbetts Brook, roof gardens, and more. All events are free. It is encouraged to RSVP for in-person events, but since this will be outdoor, you must RSVP to get the event link. Please note that all outdoor events will follow strict COVID safety protocols.

Learn the Botanical Stitches for Your Garden

Below are stitch patterns that represent different plants. You will be amazed at how easy they are to do! In a few days, these photos will be replaced by videos of Matthew Lopicz-Jensen and Ana de la Cruz operating how to create the botanical stitches. The stitch designs are inspired by a collection of plants that would thrive on the rooftops of the buildings along Broadway. You can follow along with these videos to learn how to embroider each plant. Then use the stitches to design your own gardens. It's easier than it looks!

Learn more about Tibbetts Brook and Green Roofs!

Here's an interactive map, a collection of videos, and other resources to help you learn more about the environmental science behind the project and the history of Tibbetts Brook in the Bronx.

FOLLOW THE STORY IN THIS STORYMAP BY MATTHEW LOPICZ-JENSEN:

WATCH A PROGRAM ABOUT THE INSPIRATION FOR THIS PROJECT:

READ FROM AN ESSAY ABOUT TIBBETTS BROOK:

Walking Tibbetts by Matt Jensen

After Matthew Jensen made up for a virtual walk through the Tibbetts Brook Watershed in the North West Bronx, with insights from renowned ecologist Eric Ruckelshaus and the NYC DEP's Phil Burt and Tanya Thomas.

WATCH A PROGRAM ABOUT THE INSPIRATION FOR THIS PROJECT:

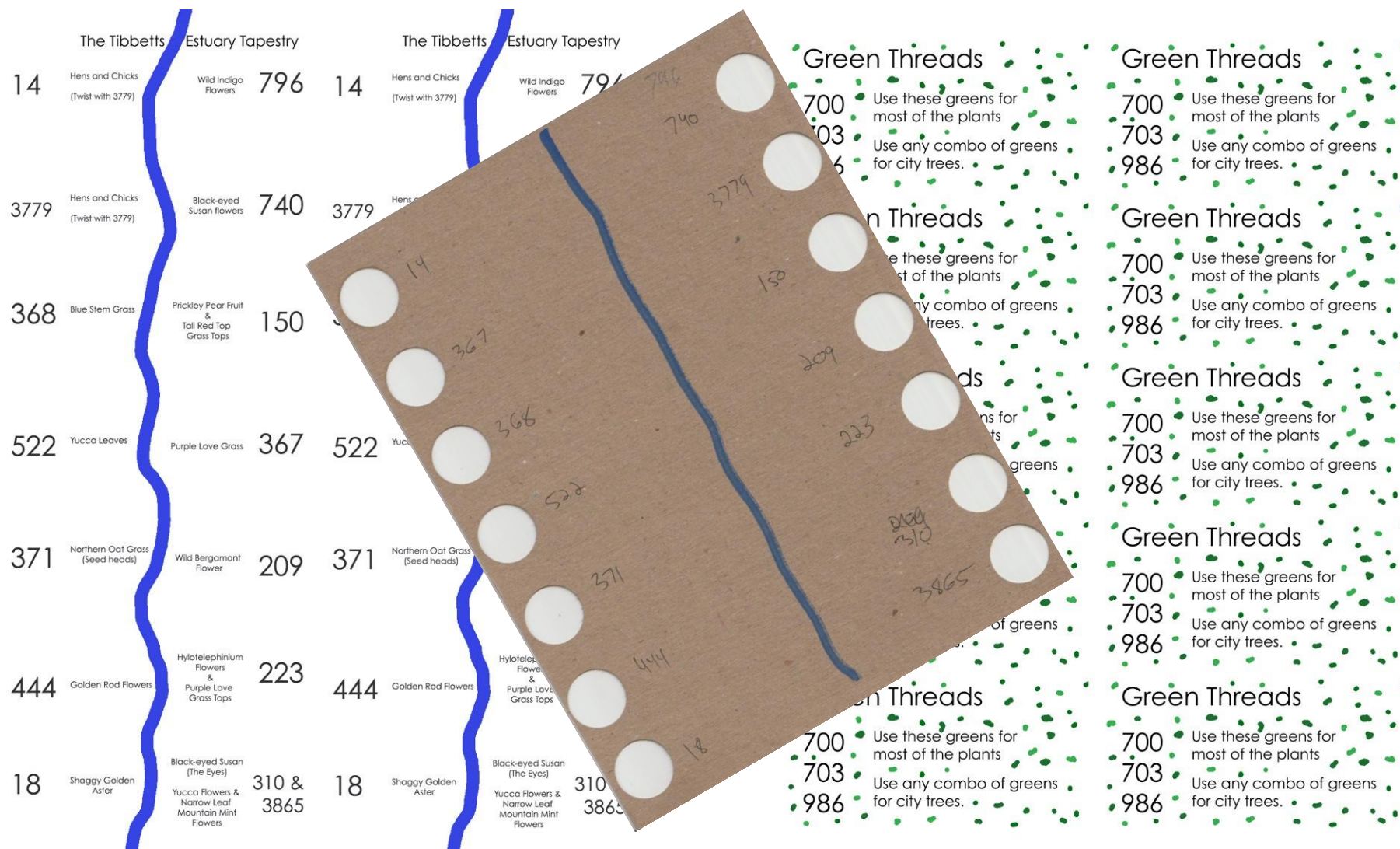
READ FROM AN ESSAY ABOUT TIBBETTS BROOK:



EL EQUIPO

THE KIT





Parts of the thread kit before being assembled

Sample tile
embroidered
by a volunteer.









The Tapestry on exhibit in the Van Cortlandt House Museum, 2022













Volunteer stitcher talking about the process and personal experience of working on the project during the pandemic, Riverdale Senior Center, 2023



Volunteer stitchers pointing out their squares, Van Cortlandt House Museum, 202

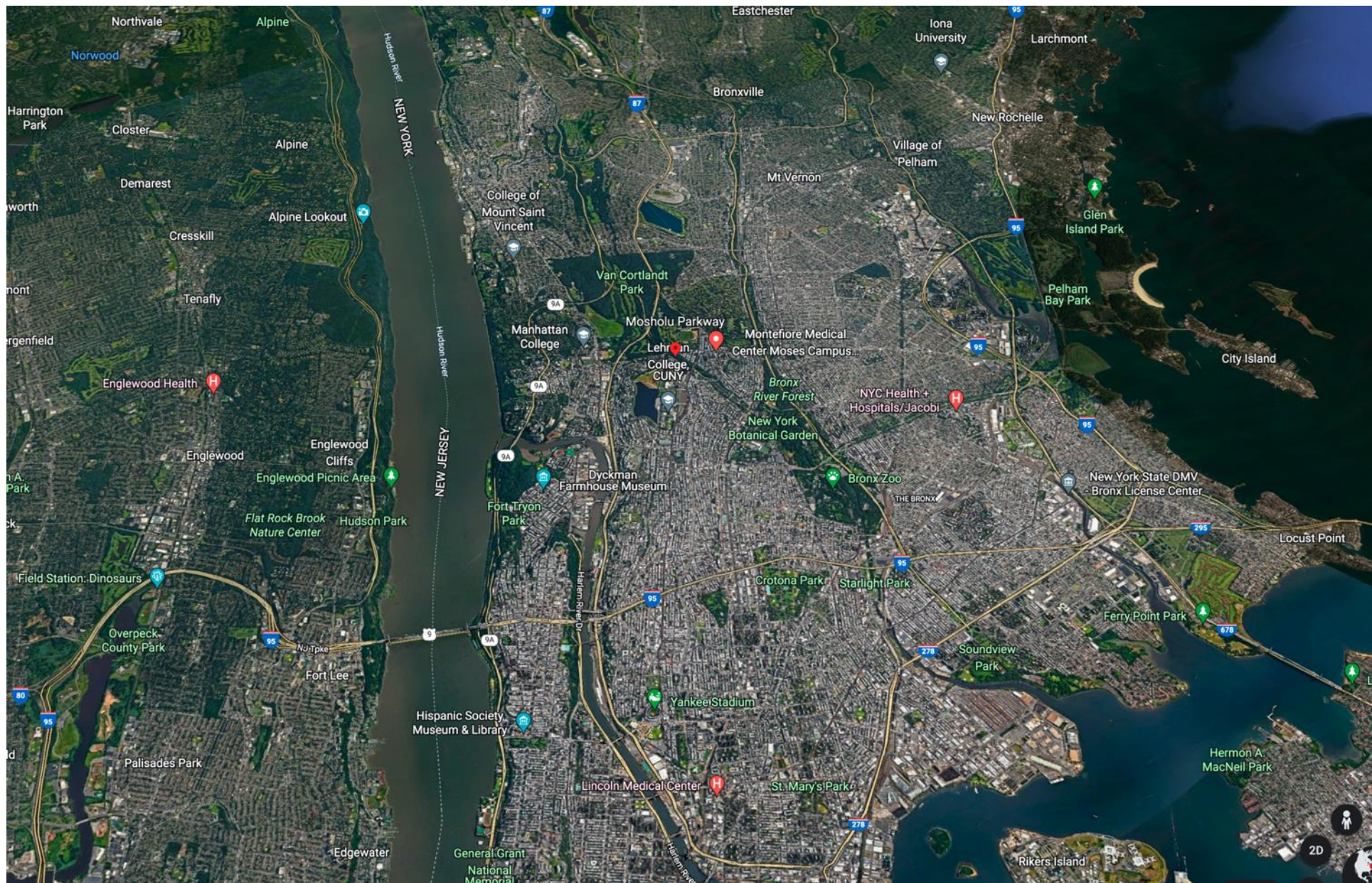
Project 2: The Mosholu Teaching Forest

A community-building adventure centered on the restoration and reforestation of land in Norwood, a neighborhood in North Central Bronx.

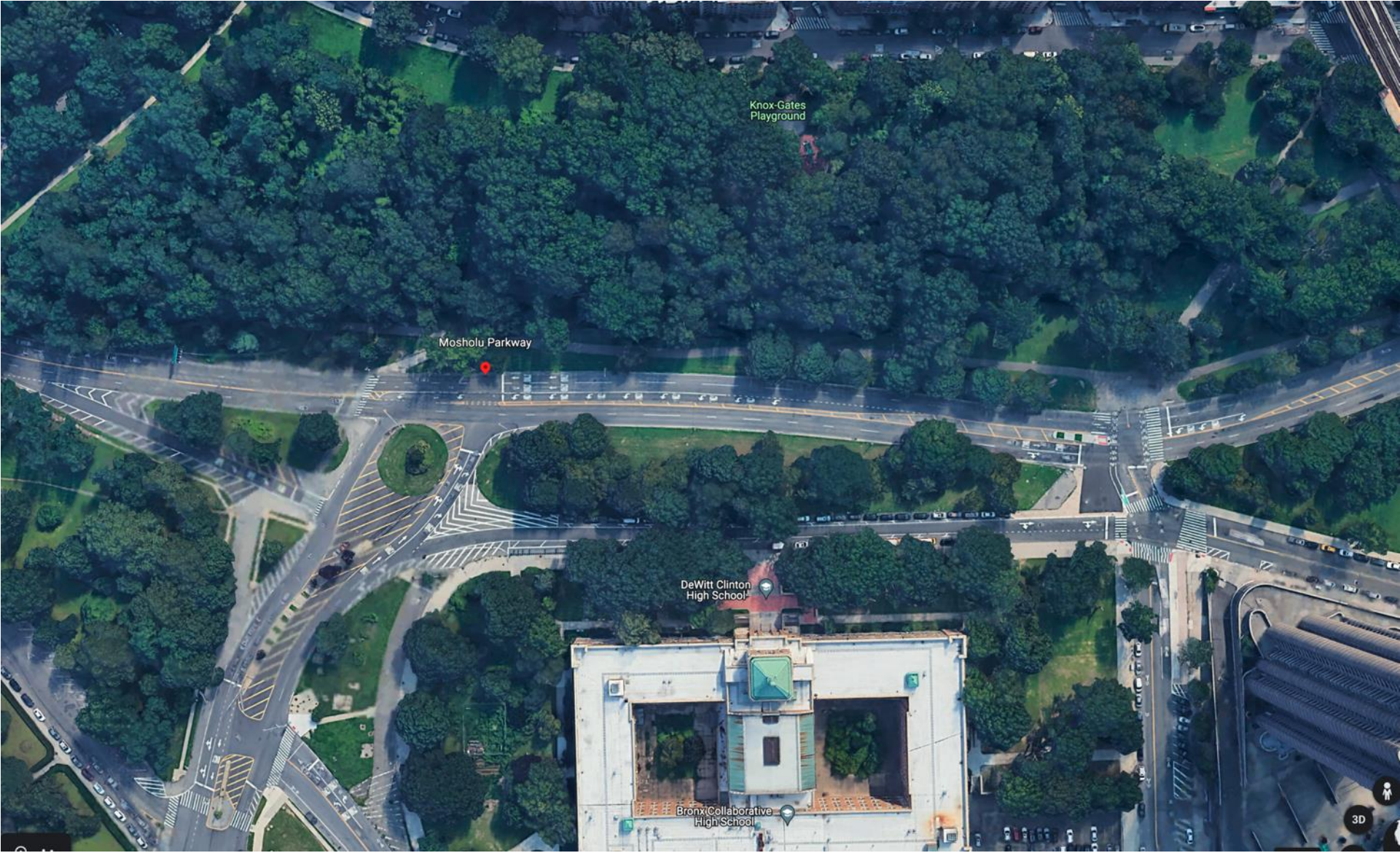
- Urban heat island effect
- Storm water retention
- Tree canopy cover
- Green career pathways for Bronx students
- Vine and invasive management
- Trail building
- Native flora

Q: What do you do with a semi-abandoned 20-acre forest in the middle of a neighborhood, surrounded by schools and public transit, in the Bronx?

A: Restore, clean, replant, and reconnect the forest to the community to create a space for learning and establish pathways for students to pursue green careers.









View from Mosholu Forest side of the Parkway

Mosholu Parkway "The Hill"

Site for the "Mosholu Teaching Forest" project

High Schools Nearby:

Dewitt Clinton
Bronx Collaborative High School
Bronx Science
Academy of Mt St. Ursula
HS of American Studies

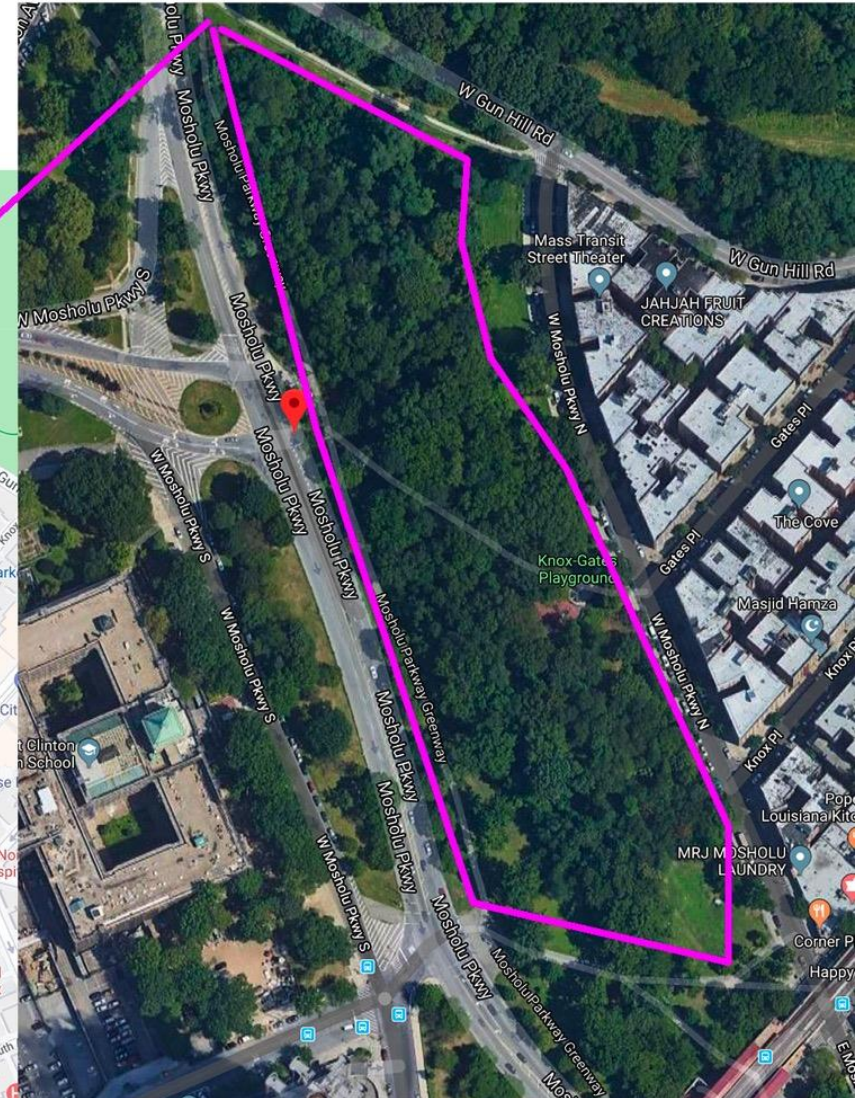
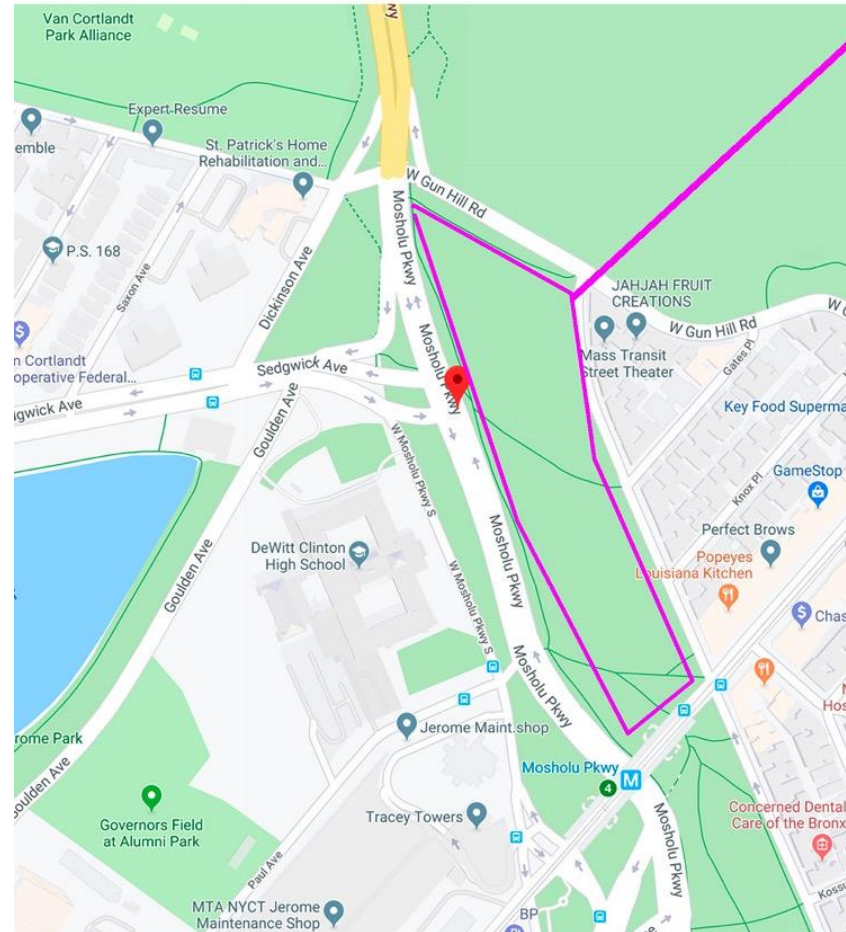
University: Lehman College

Grade and Middle Schools

P.S. 051
P.S. 095
P.S. 008
P.S. 20
P.S. 280
P.S. 056
P.S. 094

Pre-K Sites Nearby: 6

Head Start Programs Nearby: 3





Mosholu Vineland, March 2022 (Cleared and remediated in 2023)



Mosholu Vineland, March 2022 (Cleared and remediated in 2023)



Mosholu Vineland, March 2022 (Cleared and remediated in 2023)

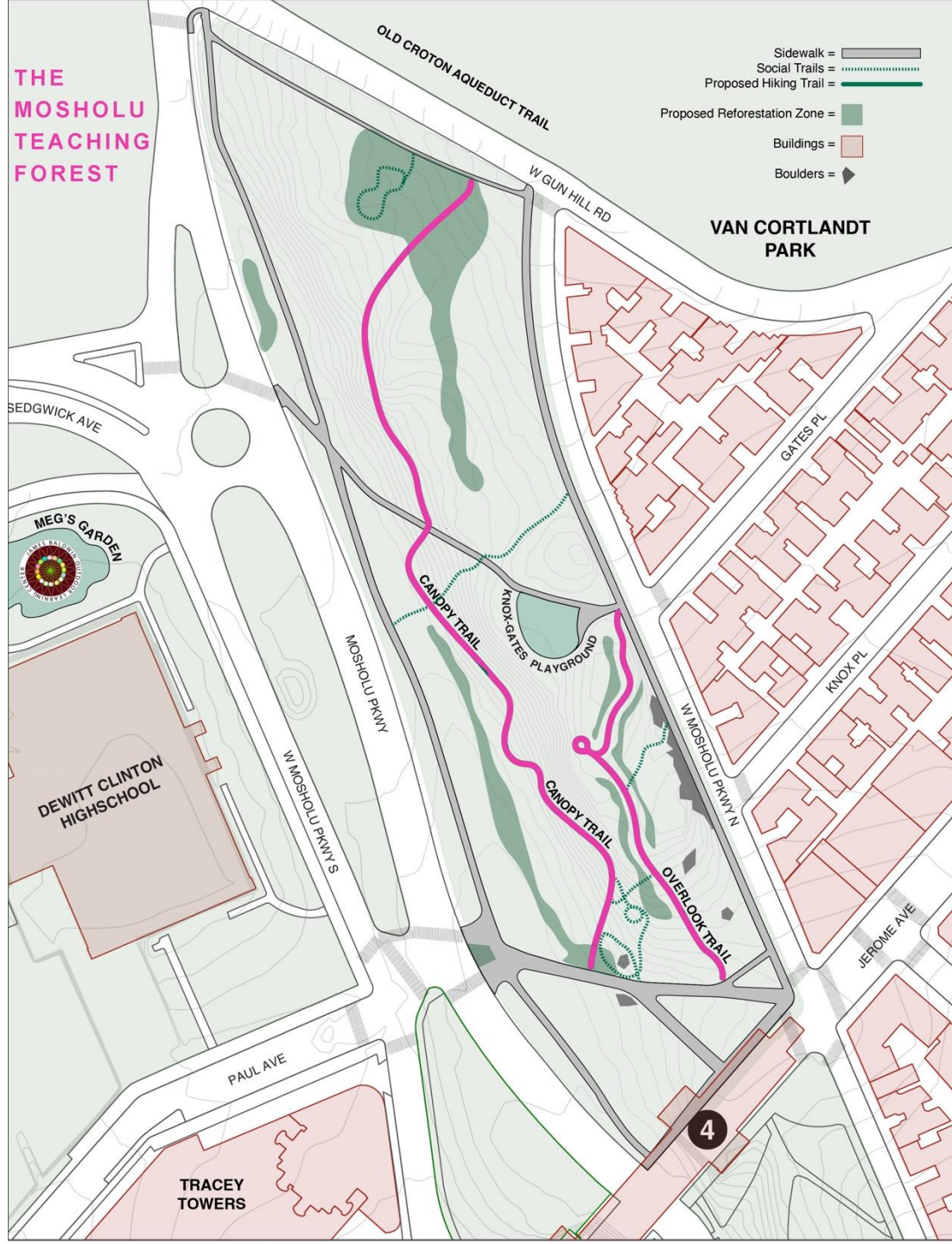


Mosholu Dump Site, March 2022 (Cleared in 2023)

White oak lost to vines
(one of the One-Million
Trees).

When you plant trees but
don't support community
stewardship the trees don't
always make it.





Pink Lines = Proposed Trails

STEWARDSHIP IS
MAKING A
DIFFERENCE!





Wave Hill WERMS



Fordham Environmental Studies Students



Summer Youth Employment Crew
with the James Baldwin Outdoor
Learning Center directors



Adam Thornbrough, NYC Parks Arborist, invasive plant removal



A Plant Walk, 2022



Drawing the future trail.

Creative Time Walk Artist Walk, August 2023



Creative Time Walk Artist Walk, August 2023



The First Community Walk and Talk, September 2023



Visiting the dead zone (future planting site)

The First Community Walk and Talk, September 2023



The First Community Walk and Talk, September 2023



Planting hickory nuts

The First Community Walk and Talk - September 2023



Using photographs to show progress, seasons, and histories

A few educational highlights...

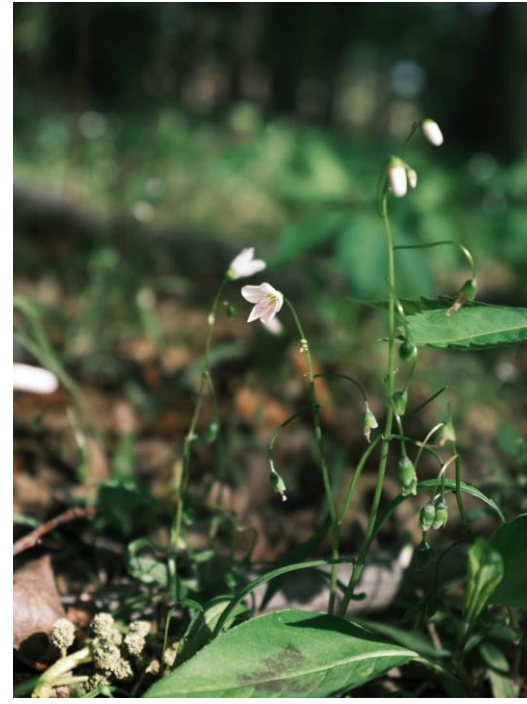
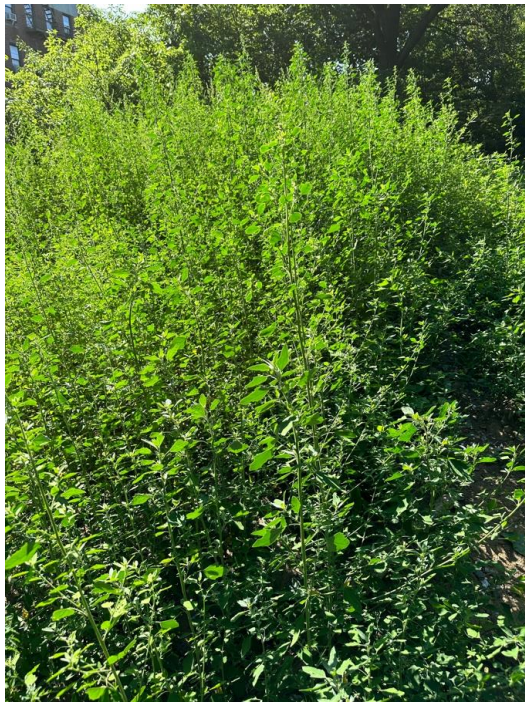
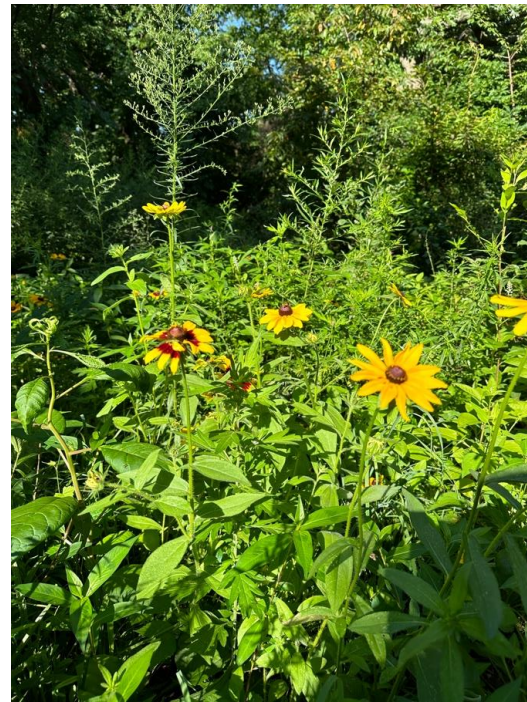


Largest sassafras tree in the Bronx, one of the oldest in NYC



Visiting the largest,
oldest tree in the forest
(pin oak)





New growth!

Wildflowers and
native plants.



Amazing examples of glacial carved bedrock

Mushrooms and Slime Molds



Community mushroom walks now happen in the Mosholu Teaching



Using the remaining (and endless) vine problems as community-building stewardship opportunities.

Project 3: New York City Street Tree Tarot

A tactile tool for teaching about street trees, stewardship, and storytelling.

- Urban heat island effect
- Storm water retention
- Tree canopy cover
- Street trees
- Community stewardship

NEW
YORK
CITY
STREET
TREE
TAROT

MATTHEW LÓPEZ-JENSEN
2023



NEW YORK CITY STREET TREE TAROT

MATTHEW LÓPEZ-JENSEN

2023



New York City Street Tree Tarot, 78-card tarot deck & book of texts, 2023

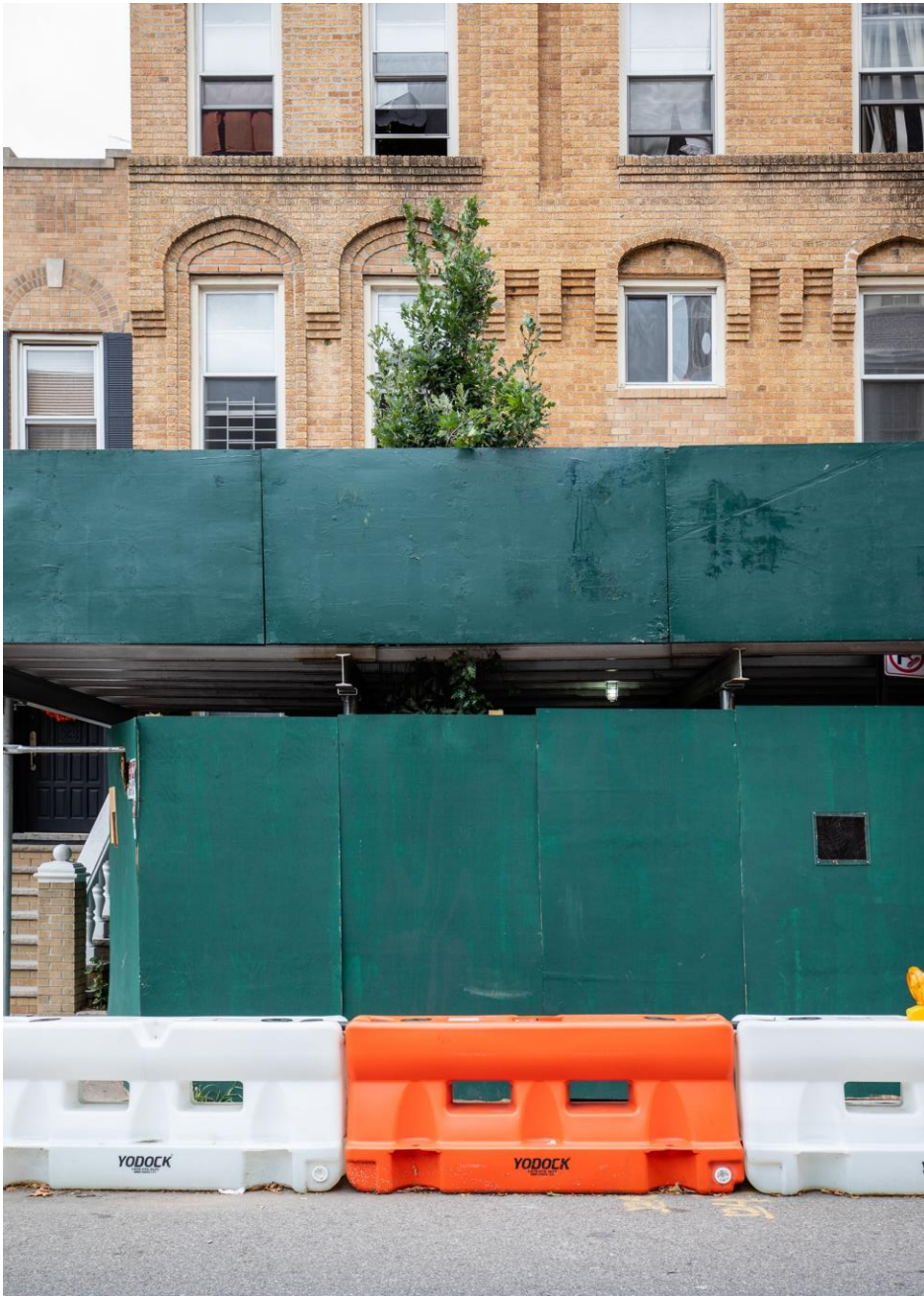


The Dawn Redwood Card features a view up through the fractal-like boughs of a magnificent tree growing out of the most unlikely four-square-feet on East 16th Street near Union Square Park. The needles of this conifer are soft, almost fur-like, and the tree is deciduous, meaning it loses its leaves in the winter. The needles turn the most vivid yellow, then a rusty orange, before dropping. The bark on the tree has a shagginess that invites someone to pet it like a large animal. The tree is native to China and has proven to be a surprisingly successful street tree.

This specific tree has managed to survive years of scaffolding and has grown wide buttress roots at the base. This tree is doing the impossible with grace and beauty. It is thriving while the world around it is being reconstructed. The thousands of tiny needles take advantage of the ambient light from the sky and of the few moment each day when the sun shines directly down between the buildings.

Sometimes we thrive out of place, often so much that it surprises everyone around us. The view up into the canopy of the tree symbolizes the mind, intellect, and persistent growth. The complexity of this growth pattern has something to do with its success in this location. One important element to this card is the care evidenced at the base of the tree. There are a homemade tree guard and flowers. Someone cares for this tree and they no doubt watch over it from one of the adjacent apartment windows. Recognizing these sometimes-invisible relationships is an important part to understanding one's success.

Potential
Uprightness
Achievement



The White Oak Tower Card is a tragic scene. All the windows on the top floor of the yellow brick apartment building are open because of a recent fire. The curtains are billowing in the breeze, the entire building has been vacated. No one died, but forty families were displaced. Green scaffolding, green construction walls, and the signature white and orange plastic barriers have been set up to deal with the forthcoming construction. They have been erected around a young fastigiate white oak tree. Only the top five feet of the tree now have access to sunlight, and it is unlikely any rain will reach its roots.

This card symbolizes a breakdown in the material world, likely triggered by something outside of our control. However, it is important to not center our focus on the cause but on your connections to whatever was damaged. Finding any shred of a silver lining in the situation may be necessary. The process of rebuilding whatever it is that fell apart may take years. Its impact may never leave our body. This young tree will likely lose all the branches below its crown. It will grow differently in the future and only the neighbors will know why. Like the tree, getting through this difficult situation will require outside intervention. Someone will have to ensure this tree is watered over the next few years because no rain will reach its roots until the scaffolding comes down. Seeking help can be very difficult, especially for those who are particularly independent.

Destruction
Repair



The Ailanthus in Love Card shows two trees joined, or kissing, through a chain link fence. How exactly this union happened is hard to say. The technical term for this phenomenon is inosculation and it is not such an uncommon occurrence. Regardless, since finding each other, these two have grown through and around what once kept them apart.

This card is about love and relationships. The ailanthus tree is out of place in North America, but it has found a way to thrive. It could be that the parties in a relationship have been bound by this shared experience of displacement. The fence separating these two trees represents some form of institutional blockade, but one that was no match for the relationship. The vines adorning the trees are a source of color and celebration. In the distance is a large highway sign, perhaps symbolizing the role that travel or relocation plays in this connection.

Love
Obstacles
Bonds

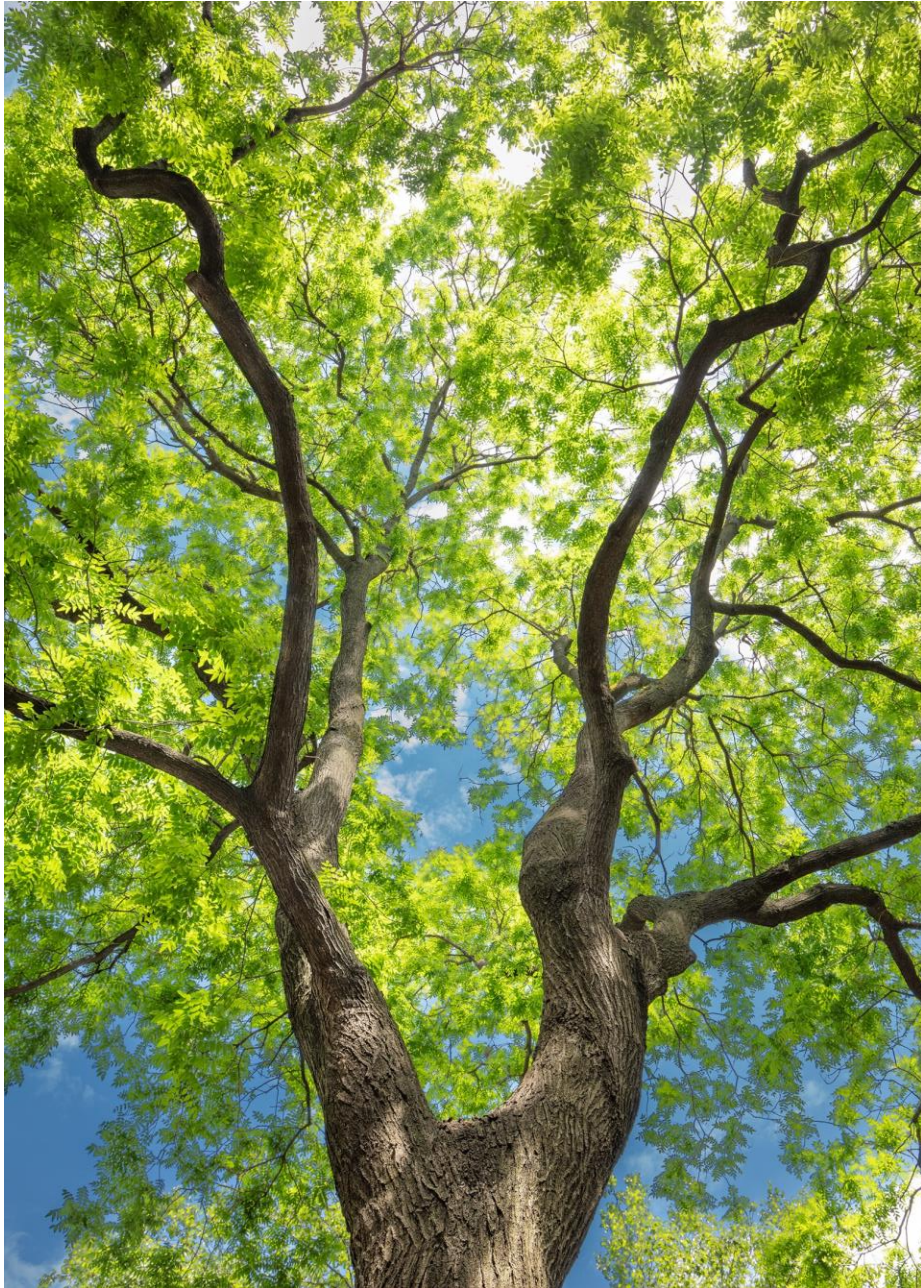


The Foolish Tree Card is a reminder to lighten up. Trees are very serious business, but not always. They are often the stage for seasonal joy and can be the focal point of reverie. It is critical to sustain and nurture the uplifting and positive experiences that trees and forests provide to humans. This young tree is wearing a green witch's nose. It had two googly eyes, but one fell off. It is smiling and adorned with a dangling plastic jewel. It is ready for the party.

Ecological calamities are now part of the news cycle and landscapes, particularly forests, are exhibiting signs of climate stress. It is hard to watch. The silver car behind this tree takes up most of the image, but it is such a familiar sight that we hardly notice it as anything more than a backdrop. However, it is creating a blockade between us and our home. How do we face such an omnipresent industry positioned as the backbone of civilization? Perhaps in disguise.

The card also reads as a collection of childhood memories; dressing up for Halloween, driving in the backseat of the car, our homes being the center of the world. How can we bring some of that lightheartedness into our lives now?

Levity
Disguise
Childhood



The Magnificent Pagoda Tree Card depicts the space and volume found within a single, old Japanese pagoda tree. The scale is hard to comprehend in a small photograph. It really requires a few minutes of patient firsthand observation of this six-story marvel. As air moves into this space it is cooled and calmed before reaching the sidewalk. As we look up at this tree, we notice that it mirrors the branching bronchi of our lungs, the tiny leaflets are dispersed like thousands of alveoli.

Another name for this tree is “the scholar tree” as it was commonly found planted around Japanese Buddhist temples. It is also a powerful ancient medicine with all parts of the plants utilized in different ways to treat a range of ailments. The card combines strength, longevity, and coolness.

Focus on the breath and finding your reflection in the natural world. This card signifies a flow of positive energy that moves between the external and internal, the body and the mind. Pursing goals with balance, equanimity, and positivity, leads to amazing things.

Purity
Beauty
Grandeur



The Timeless Death Card features a long dead Bradford pear tree surrounded by a mess of crab grass. It takes a few years for a dead street tree to lose its bark in such a way. This might represent a loss that happened over a protracted period of time. At the top of the tree there is the faint trace of ribbon, a likely residue of flags draped between the jewelry store and the tree, perhaps celebrating a grand opening. This small clue is a reminder that there were moments of celebration in the past and these are now important memories to celebrate.

The façade of the newly constructed white building next door features the face of a clock without hands. It is a powerful symbol reminding us that time is simply a construct of our waking minds. The new glass building in the distance seems to present a confrontation between historic traditions and the anonymous future.

The tonic to this anxious image is found in the small potted plant placed on a small white tray on the sidewalk in front of the window. It seems abandoned but is surely being watched over by whoever is growing flowers and herbs on the balcony. Those who were connected to whomever or whatever was lost are still here, continue to care, and might also need attention.

Forgotten
Continuation
Change



The Green Flame Card features a lone columnar elm tree in the South Bronx surrounded by an inhospitable environment of scorching urban surfaces. The razor wire on top of the metal fence adds an aggressive level of protection to the scene. This card is a warning about the loneliness that comes when humans are cut off from the natural world. It might be here in the South Bronx, it could easily be in a new glass tower complex in Hudson Yards, but a lack of other beings can take a psychic toll.

Jet streams and crisscrossed wires move across the horizon as a lone figure walks in the shade. A trickle of water leaking from a fire hydrant flows along the old bluestone curb. Perhaps some of this water is reaching this tree, but most of this precious resource is being wasted. At the base of the tree, easily overlooked, there is a shallow guard of red bricks, placed by someone in the past as a small sign of care.

The scene is one of emotional juxtapositions. The tree is a sign of hope, survival, resistance, and resilience, all wonderful things. But we can be hopeful, and survive hardship, resist our surroundings, be praised for our resilience, and still be lonely.

Isolation
Hopefulness
Possibility



The East Village Willow is a powerful being. It is also very rare; it might be the only street tree willow in Manhattan and one of a handful in all of New York City. As soft and gentle as the tree seems, despite its gifts as a healer (willow bark is the original aspirin), it can survive in this most impossible location. This tree is something of a badass, but it can also work a bandage if necessary. The card symbolizes perseverance and is a celebration of being out-of-place.

The tree proudly bears its scars, the result of continual impacts with trucks. It is certainly the product of another time. Its origin story is likely lost. Maybe it is a volunteer tree growing in the space where another tree once grew. Maybe it was planted decades ago by a community gardener. It certainly breaks all the rules in contemporary urban forestry principals, which, unfortunately, do not favor planting fast-growing, water-loving trees like willows. The tree is also very responsive to air, dancing in the slightest breeze, and to finding underground sources of water.

Behind the tree there is a laundromat, a dentist's office, and a kitchen appliance shop, each a manifestation of care in some form. Our clothes, our teeth, and the preparation of food are central to our daily lives. This card is a reminder to center what is important and necessary. However, rock on, and look for the hidden door in the back of the laundromat that leads to a bar in the secret subbasement. The password is "salicin."

Resilience
Contradictions
Care



The Leaning Golden Rain Tree card features a perfect example of this beautiful tree draped with its signature paper lanterns. And it is perfect because it has more character than others. This tree was likely backed into by a car not long after it was planted. And then it was left to grow. And it did. The adjacent minivan is parked in just the right spot to create the illusion of impact, it seems as though the tree is in the process of falling.

There is something endearing about a crooked tree. Almost every tree in nature bares the sign of some past trauma or blight. Many renderings of trees in landscape paintings, especially in historic scrolls from China and Japan, where this tree is native, depict weathered trees in the most curious forms and inhospitable places. This card is about growing into one's perfection despite (or because of) a disruptive event in one's youth. Few people make it to adulthood without experiencing some life-altering trauma or loss. Now, years later, we can look back at that situation and understand how it changed our path. The tree in this card is thriving. It might serve as a lesson or as a mirror, depending how the trauma has been felt.

Improvisation
Balance
Grace



The Saddest Tree in New York Card is a reflection on the surrounding environment not on the tree. This young Kentucky coffee tree appears to have eked out an existence for a few years before succumbing to stresses on this block of West 28th Street in Chelsea. Planted in a small bed along a south-facing wall, this tree was scorched by the summer sun to the point of breaking. The anonymous government building stretches from 9th to 10th Avenue and it is a foreboding place, even for a human.

Our built environments can hurt us. Some places are not meant for trees or humans. When something or someone is failing, in health or life, we often assume the fault resides with the tree or person. When this tree dies another will be planted, then another, then another. There are versions of this scenario that play out but with human actors instead of trees. This block has a design problem that needs to be addressed before it is made suitable for life. If trees are truly important for this location, they need to be irrigated, stewarded, and the surrounding pavement made more suitable to life.

This card is a warning to assess our relationships with our surrounding environments at work, home, in the neighborhood, and within relationships. Trees are sessile: they cannot get up and relocate, but humans can, most of the time. And sometimes that is the best thing to do.

Condemned
Abandonment



The Mossy Elm Card is a powerful reminder that one tree is an entire ecosystem. This old elm tree in the West Village has defied the odds, growing on a narrow street, out of a space no larger than the base of its trunk, and while facing the same blights that felled so many majestic elm trees. We often forget, or simply never learn, that every single tree is also so many other living organisms. Similarly, we are rarely taught about how our human bodies are also their own ecosystems filled with and affected by so many unique organisms.

The mossy side of the tree does, in fact, face north, just like in folk tales about wayfinding in the forest. The trunk stays green all year long. A cold wet rain in February will revive this vibrant bit of life months before the first leaves return. The card is a reminder that we are doing something even when we think we are doing nothing. We might even be helping others find the way. It takes time to stand out but eventually we establish ourselves, and when we do we bring a bit of life and color to the world at the hardest times.

Pathways
Direction
Softening



The World Card features a vibrant and artful pocket garden planted in the rotten stump of an old street tree. Based on the size of the stump, the tree must have lived for over 100 years. Surely its loss was felt by the neighborhood. In its place, until a new tree is planted, there is a delightful garden, full of life, solar powered flower lights, and painted stones. The horse with googly eyes is hard to miss and the eyes of the ladybug rock follow you as you walk by.

All life, human and non-human alike, lives, loves, thrives, and parties, in the remains of all that once lived. Every organic nutrient in the soil was once living a life. Trees spent millions of years living and dying, terraforming, and designing the atmosphere to be perfect. We humans came from other humans and our present existence required the passing of others. Celebrating can be a form of honoring everyone and everything that came before us. But we must do so with the awareness that we are on our way to being ancestors ourselves and leaving the world safe for future life is necessary.

Regrowth
Loss
Expression



The Scrap Guard Card features an assemblage of objects gathered up from the curb and used to make a messy, but functional, garden guard in an empty tree bed. It has a certain artfulness to it. A few contemporary artists come to mind. The black handle might have been an umbrella, or maybe a child's fishing rod. There seem to be some shelving components, maybe an old granny-cart broken down for parts. Sometimes it is a relief to encounter something that is not perfect.

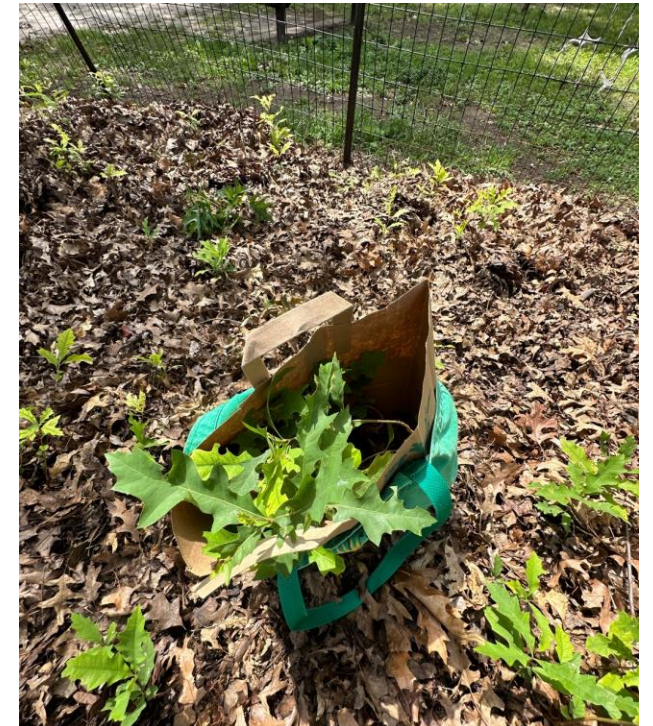
It is time to be resourceful. Everything we need is already around us. All we need to do is make the connections and we will have constructed something that is unique and special. Once that has been accomplished, we can cultivate whatever we want or just sit back and see what grows within the created space. Some might see this structure as a total mess, and it is. Yet it is also the perfect symbol for many functioning systems and relationships that are nothing more than a confused collection of temporary solutions and personal connections.

Thrifty
Resourceful
Creative

Neighborhood-as-Nursery

What if all the trees we needed in urban spaces were grown, from seed, in the spaces or landscapes, or the very tree beds, where they would otherwise be planted as larger trees?

- Instead of money spent elsewhere, to companies with no community ties, someone in each neighborhood would be watching over the trees, allowing each tree to learn and adapt to the spaces where they will grow into maturity.
- Conditions for the young trees would have to be improved and those conditions would be shared by the humans in the area.
- Fewer trees would die in the shocking process of being bagged, transported, placed in a new micro-climate, and expected to survive. A tree is not a streetlamp.
- The bond between urban residents and urban trees would grow, inequities would be reduced, and we would have fewer dead trees.
- Trees are, essentially, free. Support stewardship.



“Remember when we grew these trees from seed and watched them grow tall?”

Want a Street Tree Tarot reading?

Join the off-site event: The Multi-Sensory Urban Forest: Many Ways of Knowing, Sensing, and Caring Organized by USDA Forest Service and The Nature of Cities

Today from 1:30 - 3:00pm

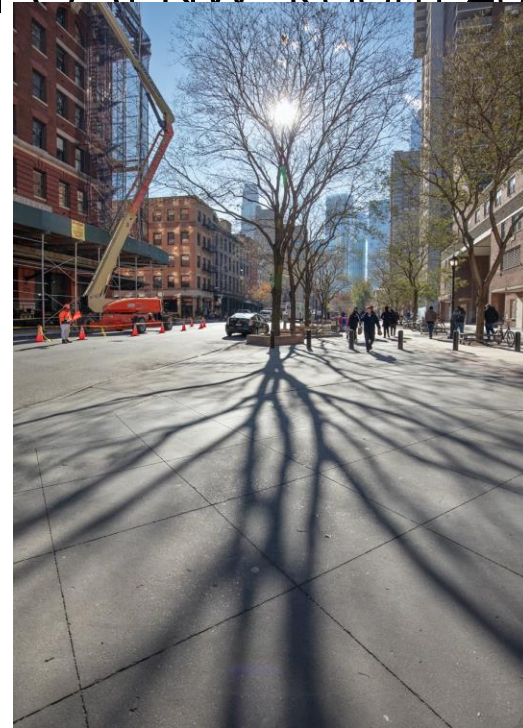
Location: Martin Luther King Jr. Memorial Library, 901 G St NW Room 401A



PAST



PRESENT



FUTURE



Thank you

Matthew López-Jensen | Artist

Educator: The New School & Fordham University



mjensen54321@yahoo.com

Instagram [@mattlopezjensen](https://www.instagram.com/mattlopezjensen)

www.Jensen-Projects.com



Food and Agriculture
Organization of the
United Nations





2nd World Forum on Urban Forests

Washington DC, 2023



DOWNLOAD PRESENTATION HERE

2nd **World Forum on Urban Forests**

2023



**World Forum on
Urban Forests**



Salud

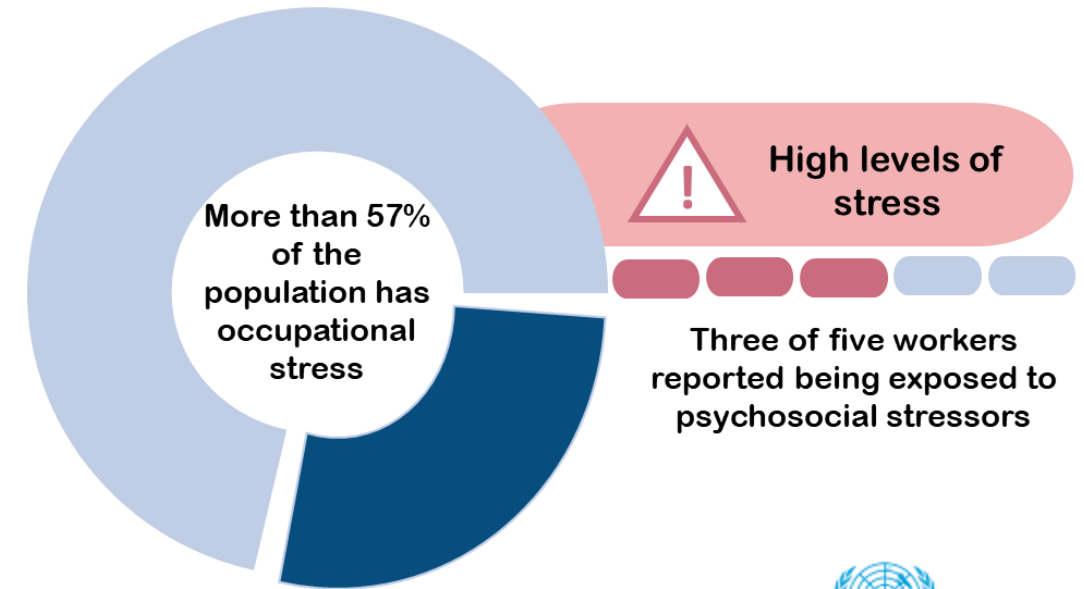
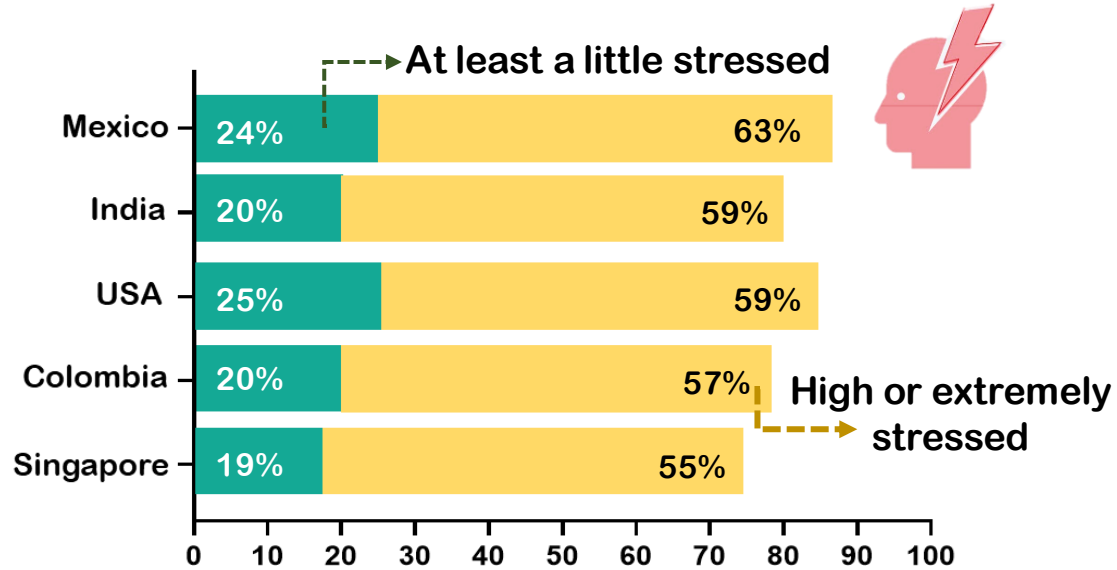
Effects of nature immersion therapy: Results from a pilot study

Dr. Diana Marcela Paredes Céspedes

Environmental and Occupational Health Research Group

Instituto Nacional de Salud

October 16, 2023 – Bogota, Colombia



High workload

Lack of independence and autonomy

According to the Ministry of Health, depression is the second cause of health problems in Colombia.

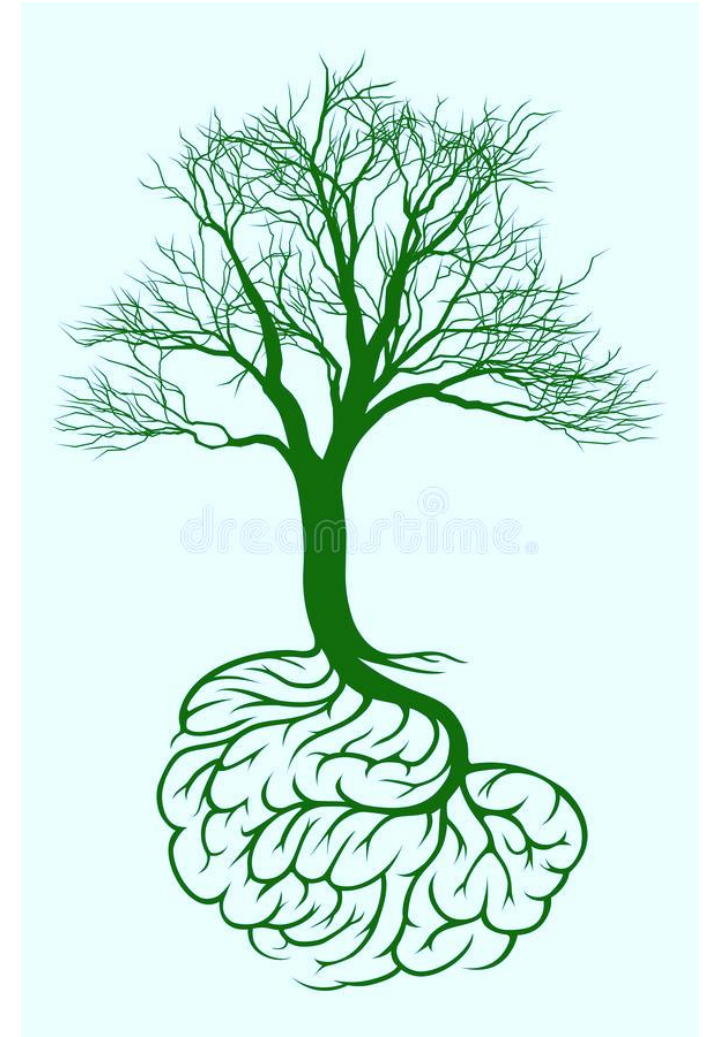
21 million Colombians in the last year reported working more than 40 hours per week.

3 GOOD HEALTH AND WELL-BEING

3.4 By 2030, promote mental health and well-being.

AIM

Evaluate the effects of immersion therapy in nature "Vitamin N" for the reduction of stress levels compared to the regular intervention carried out by epidemiological surveillance programs in conventional psychosocial risk in Colombia, 2022 - 2024.



Pilot study



Phase 1



Phase 2



Phase 3

-Sociodemographic conditions
-Perceived Stress Scale - 14
-The State-Trait Anxiety Inventory (STAI)
-Pittsburgh Sleep Quality Index

Saliva samples - Cortisol quantification



1st week

2nd week

3rd week

4th week



-Perceived Stress Scale - 14
-The State-Trait Anxiety Inventory (STAI)
-Pittsburgh Sleep Quality Index

Saliva samples - Cortisol quantification



RESULTS

Pilot study



Table 1. Sociodemographic characteristics of the study population

Sociodemographic characteristics	Control ¹ (n=8)	Parks ¹ (n=9)	Forrest ¹ (n=8)	p ²
Age	41 (37, 50)	39 (32, 44)	36 (30, 58)	0.9
Sex				>0.9
Male	3 (38%)	4 (44%)	4 (50%)	
Female	5 (62%)	5 (56%)	4 (50%)	
Marital status				0.3
Married	3 (38%)	4 (44%)	1 (12%)	
Divorced	1 (12%)	1 (11%)	0 (0%)	
Single	3 (38%)	2 (22%)	6 (75%)	
Common-law marriage	1 (12%)	2 (22%)	0 (0%)	
Widowed	0 (0%)	0 (0%)	1 (12%)	
Educational level				0.3
Doctorate	1 (17%)	0 (0%)	1 (12%)	
Postgrade	4 (67%)	1 (14%)	2 (25%)	
Highschool	1 (17%)	1 (14%)	2 (25%)	
Technical	0 (0%)	1 (14%)	2 (25%)	
University	0 (0%)	4 (57%)	1 (12%)	
Socioeconomic status				0.06
2	2 (29%)	4 (44%)	3 (38%)	
3	4 (57%)	0 (0%)	4 (50%)	
4	1 (14%)	5 (56%)	1 (12%)	

¹ Median (IQR); n (%)

² Kruskal-Wallis rank sum test; Fisher's exact test

RESULTS

Pilot study

Table 2. Yoshitake and Pittsburgh scales scores

Group	Scale	Pre	Post	Delta	<i>p</i> *
Forest	Yoshitake-Physic	1.75	1.50	0.25	0.26
	Yoshitake-General	3.00	2.13	0.88	0.07
	Yoshitake-Mental	1.75	1.38	0.38	0.14
	Pittsburgh	65.00	56.00	9.00	0.17
Parks	Yoshitake- Physic	1.22	0.89	0.33	0.04
	Yoshitake-General	2.00	1.89	0.11	0.42
	Yoshitake-Mental	2.00	1.89	0.11	0.41
	Pittsburgh	67.00	58.00	9.00	0.05
Control	Yoshitake- Physic	2.38	1.25	1.13	0.01
	Yoshitake-General	4.63	3.00	1.63	0.03
	Yoshitake-Mental	3.25	3.00	0.25	0.39
	Pittsburgh	68.00	68.00	0.00	0.50

*Paired t-test. Alternative hypothesis: the mean difference is greater than 0.

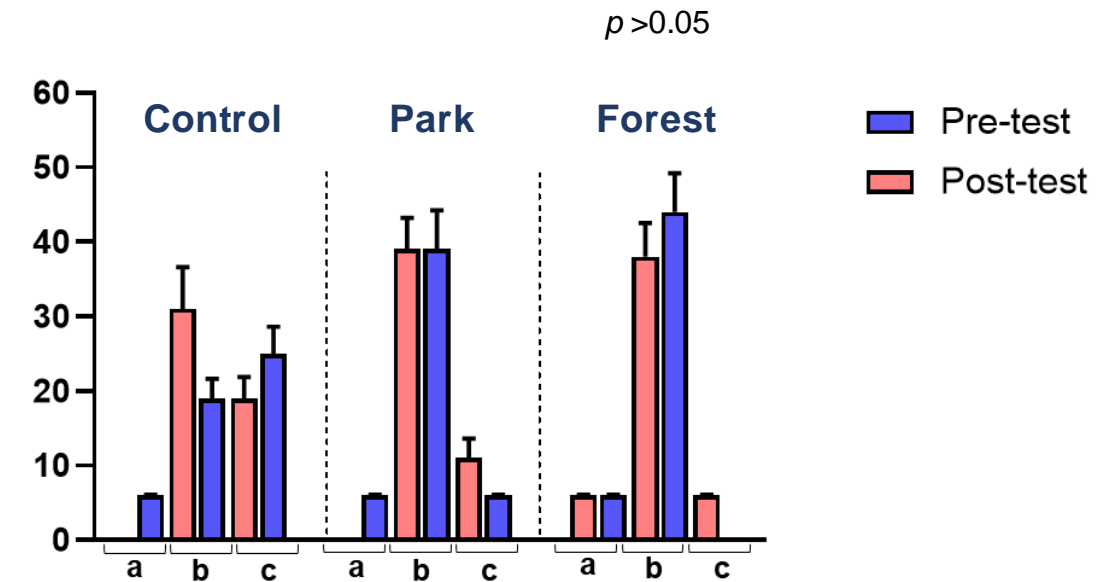
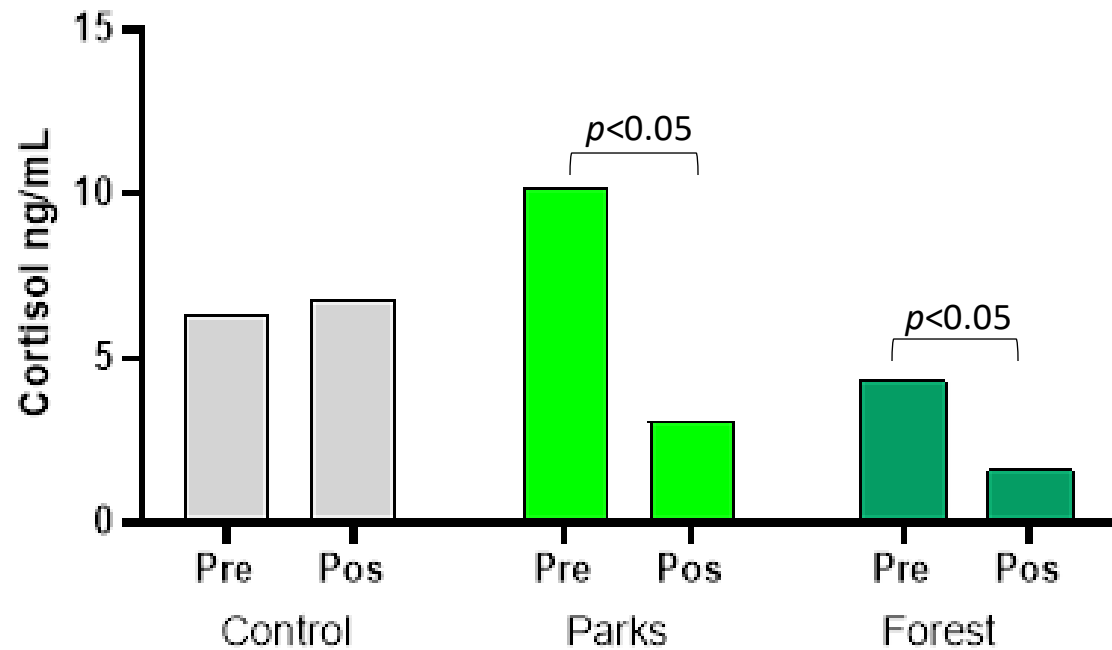


Figure 1. Perceived stress levels by study group

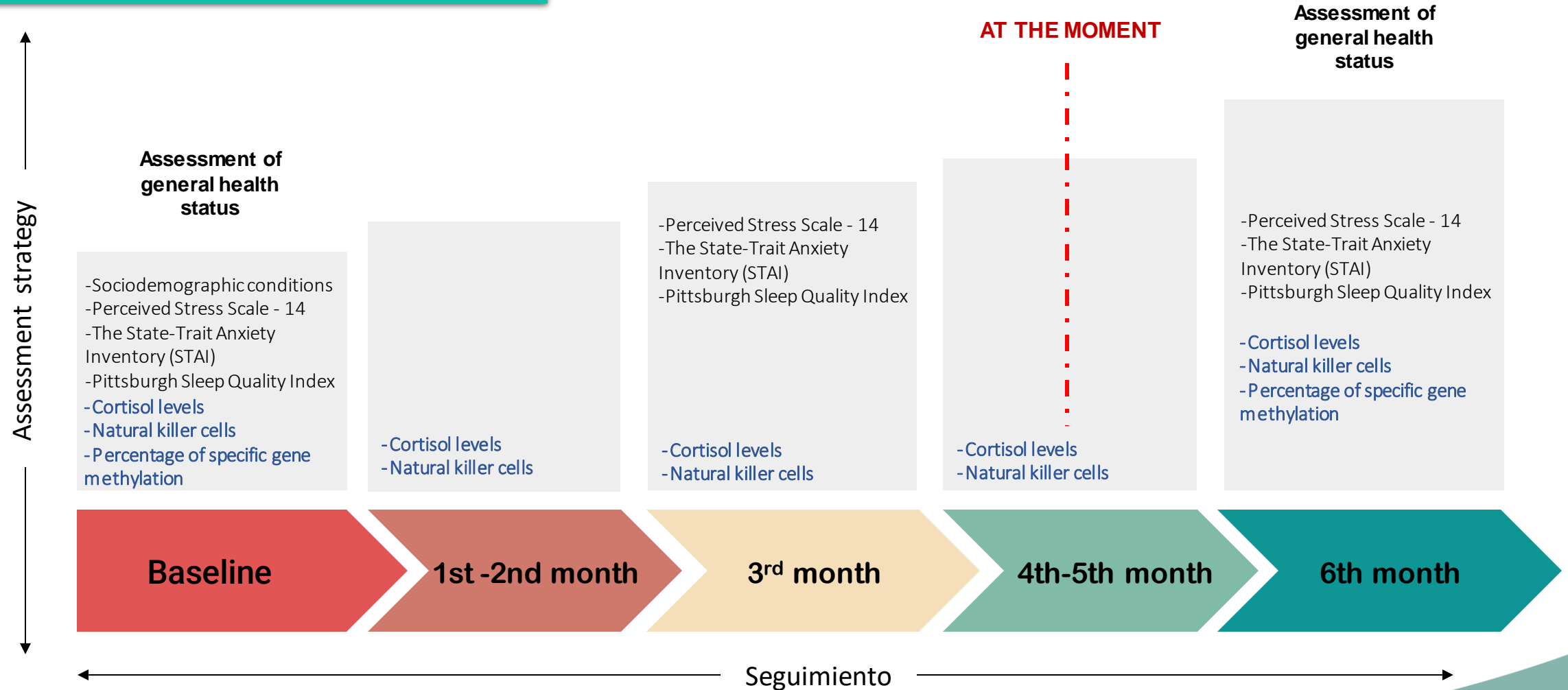
- a. Almost never
- b. Sometimes
- c. Fairly often

RESULTS

Pilot study





Timeline of the experimental phase



Population study



		INS	Total	Age \bar{X} (range)
Control group	20	16	36	41.5 (22, 57)
Park/Intervention group	15	21	36	42.3 (26, 66)
 Forest/Intervention group	12	24	36	42.3 (23, 61)
Total	47	61	108	

CAR

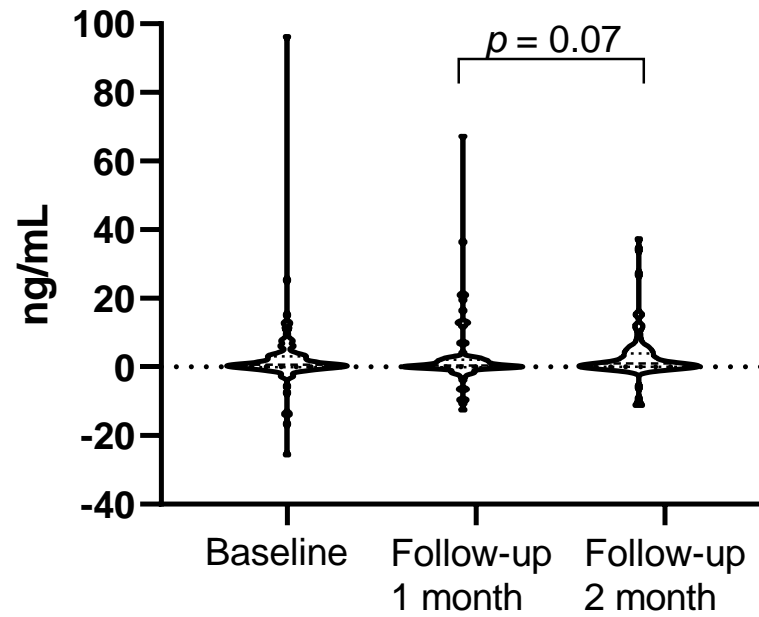


Figure 1. Results of Cortisol Awakening Response. The value of p was obtained by Wilcoxon signed rank test.



Sleep quality

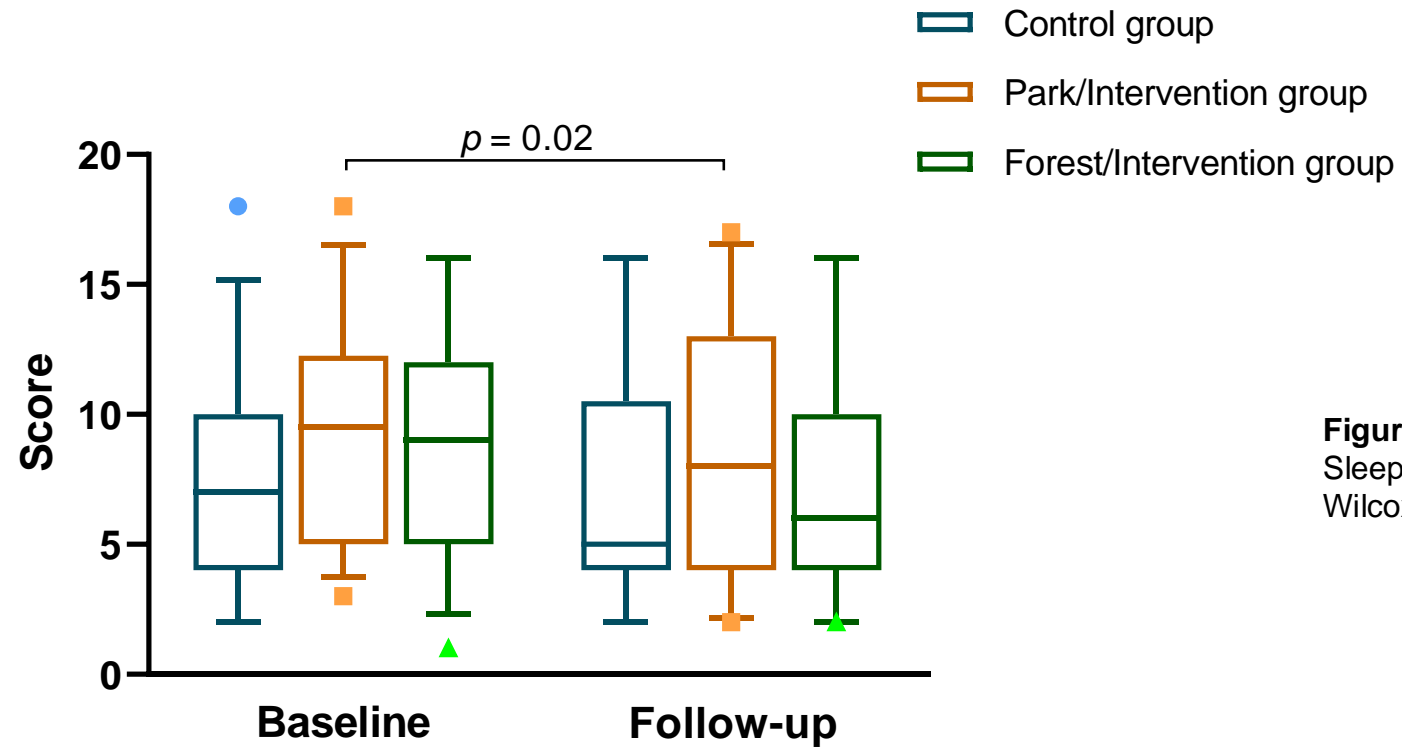


Figure 2. Perception of sleep quality through The Pittsburgh Sleep Quality Index (PSQI). The value of p was obtained by Wilcoxon signed rank test.

Fatigue

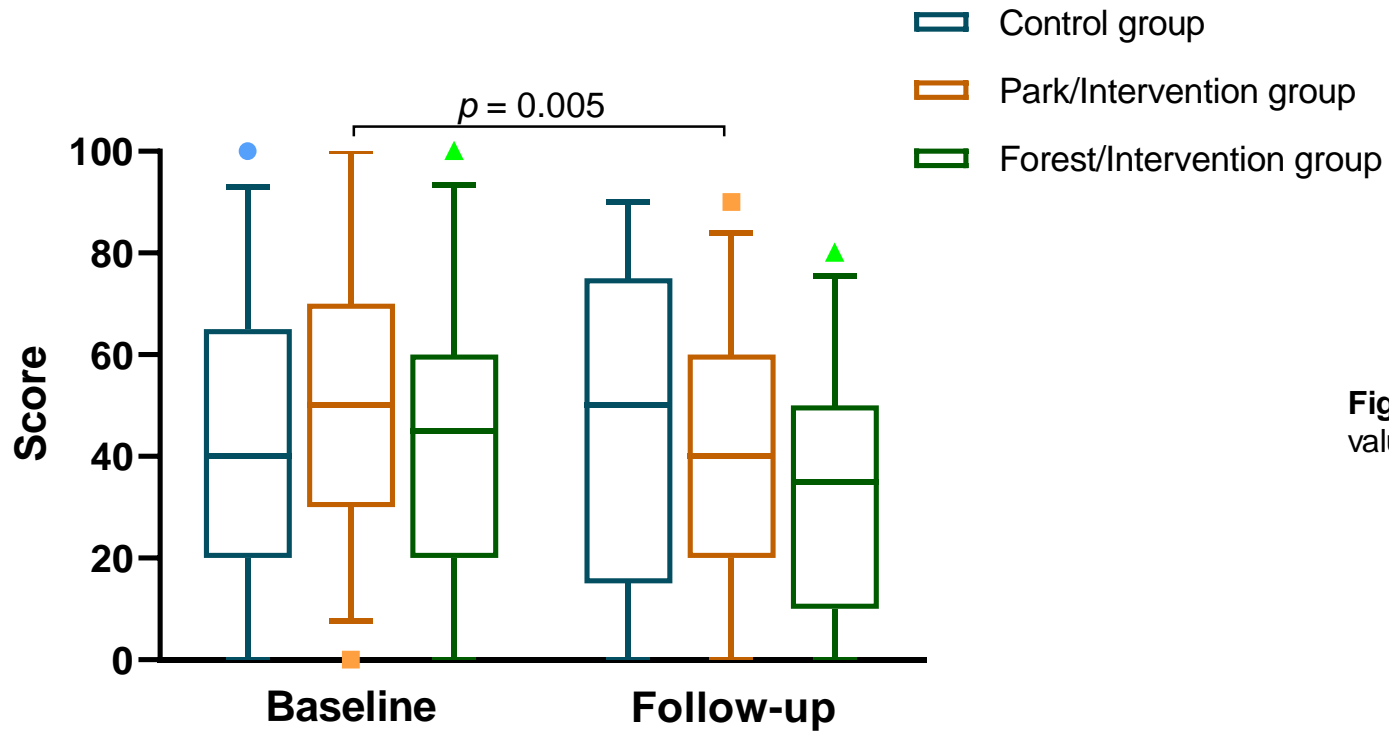


Figure 3. Results of Yoshitake fatigue questionnaire. The value of p was obtained by Wilcoxon signed rank test.

Correlation

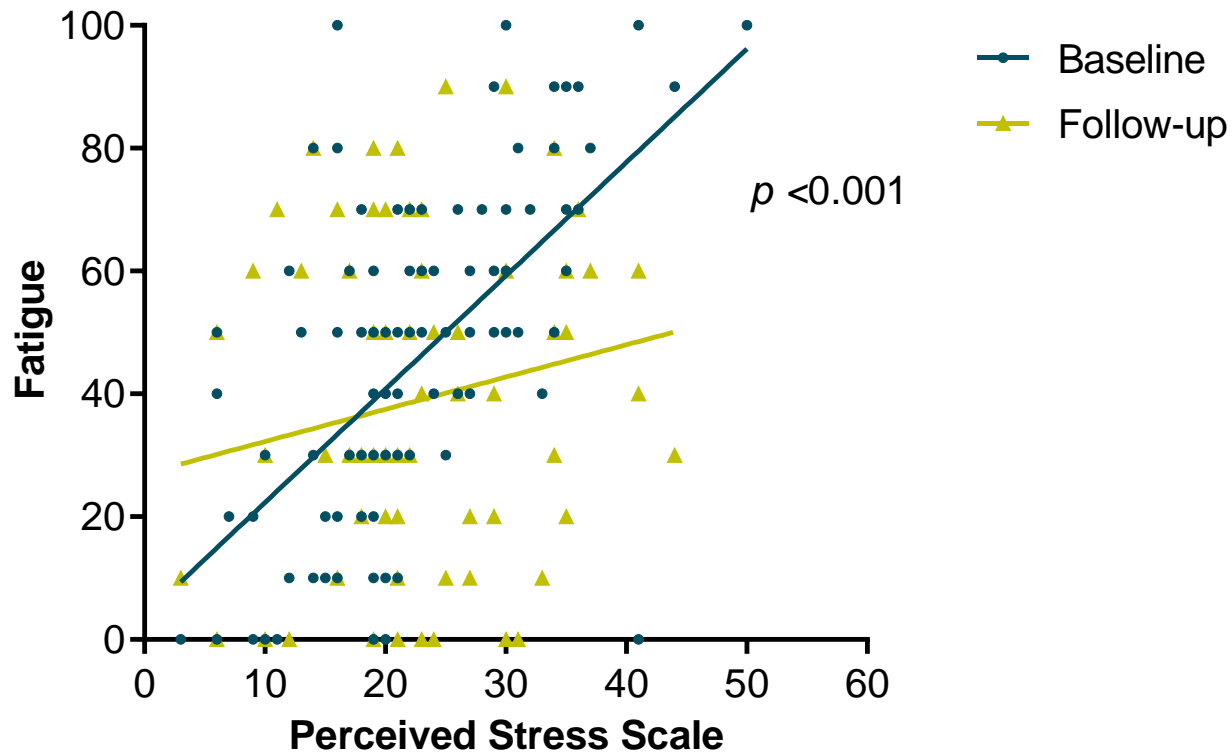


Figure 4. Correlation between Perceived Stress Scale and Fatigue score. The value of p was obtained by Spearman correlation test.

Multivariate model

Table 3. Multivariate analysis for the Cortisol Awakening Response

Parameter	β	95% CI	<i>p</i>	R- adjusted
Sex				
Male	Base			
Female	0.93	-5.33, 7.18	0.19	
Intervention group				
Control	Base			0.117
Forest	-3.89	-10.37, 2.59	0.24	
Park	-5.99	-12.26, 0.28	0.06	
Age	0.16	-0.80, 0.41	0.19	
PSQI - follow up	5.06	1.88 – 8.25	0.002	

**p* value was obtained by a multivariate linear regression analysis. 95% CI: 95% confidence interval.



Thank you...



JARDÍN BOTÁNICO
DE BOGOTÁ



October 16, 2023 – Bogota, Colombia

#OrgullosamenteINS



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@insaludcolombia



Instituto Nacional de Salud de Colombia

Avenida Calle 26 # 51 - 20 / Bogotá, Colombia • PBX: (601) 220 77 00 exts. 1101 - 1214



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2nd **World Forum on Urban Forests**

2023



**World Forum on
Urban Forests**



2nd World Forum on Urban Forests

Washington DC, 2023

Community Tree Stories:

Exploring Healthy Environments in Three
Boston EJ Neighborhoods



Presented by
David Meshoulam & Jerel Ferguson
Speak for the Trees Boston
treeboston.org



Overview of Project

- Supported by **Environmental Protection Agency (EPA) EJ grant**
- Focused on **3 Environmental Justice (EJ)** communities in Boston
- **Multiple partners**, including 3 community organizations, American Forests, Boston University URBAN, and storytelling NGOs
- **Goal:** learn from residents about their relationships to trees, explore relationships between people and trees, and share those stories through community walks



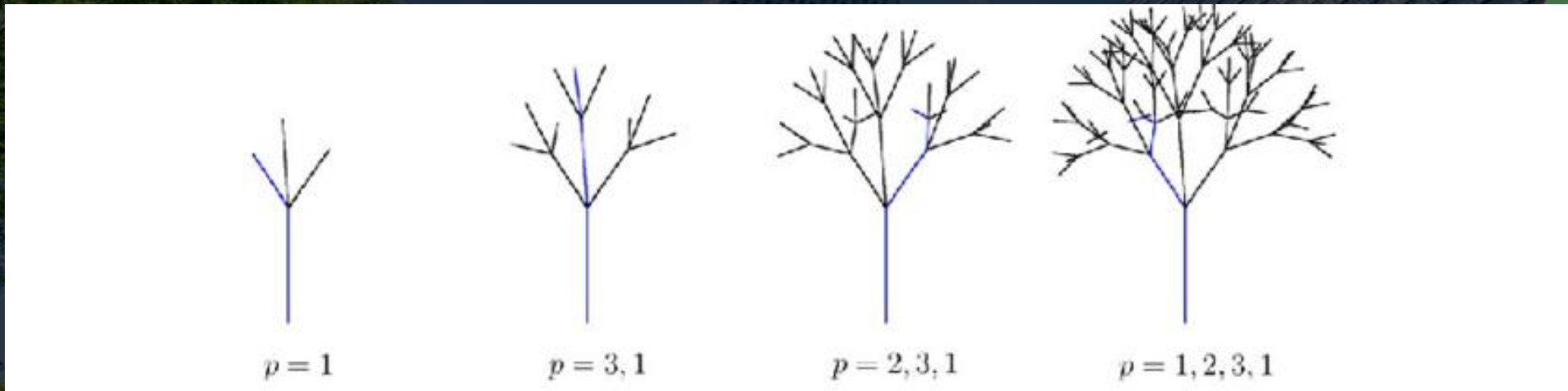
EVERYDAY BOSTON



Framework: Trees as Fractals

Fractal (n.)

A curve or geometric figure, each part of which has the same statistical character as the whole.
Similar patterns recur across scales.



Framework: Trees as Fractals

Just like trees, our relationships are fractals.

They repeat across scales of relationships:

- with ourselves
- with each other
- with our community
- with the universe

These story walks are patterns that can scale within and across people and neighborhoods.



Process: 5 phases

Phase 1: Prep and Solicitation:

Develop marketing and outreach materials to target and solicit the most aligned community groups in each of the project neighborhoods



**EPA Tree Walks Meeting - Codman Square
Neighborhood Development Corporation**

Join Speak for the Trees and the Codman Square Neighborhood Development Corporation to design our Community Tree Walk through Dorchester. Based on our last meetings, we've shared stories, learned some science and explored a neighborhood map, now it's time to put it all together.



CODMAN SQ TREE WALKS

- Create a route in Dorchester, starting from Southern Ave or whichever location is determined at the meeting
- Points of interest marked (min of 5, maximum of 7) based off of previous map activity
- Tree Stories: Secure a speaker, who is excited to share their tree story in-person and on camera!
- Which BU URSITE grid to re-visit (gas leaks, air pollution, or soil health)?
- Start scheduling dates for the 2 walks (April - June)
- Mock walk - to predetermine areas of interests (gas leaks, empty tree pits, dead trees)



RISE GATEWAY TO BOSTON

JULY
13
TUESDAY



MATTAPAN
**COMMUNITY
TREE WALK**

THE EDGEWATER NEIGHBORHOOD ASSOCIATION

Join the Edgewater Neighborhood Association & Speak for the Trees, as we engage with residents about the urban tree canopy, climate resilience and healthy neighborhoods.

MEETING AT 5:30PM
640 RIVER ST, BOSTON, MA 02126



Process: 5 phases

Phase 2: Engagement

Facilitate in person opportunities to learn about residents' experiences regarding issues of environmental health and quality of life through surveys and the sharing of personal narratives related to trees, quality of life, and history



Process: 5 phases

Phase 3: Creation

Co-develop community tree walks to explore issues that surfaced during stage 2



Process: 5 phases

Phase 4: Implementation

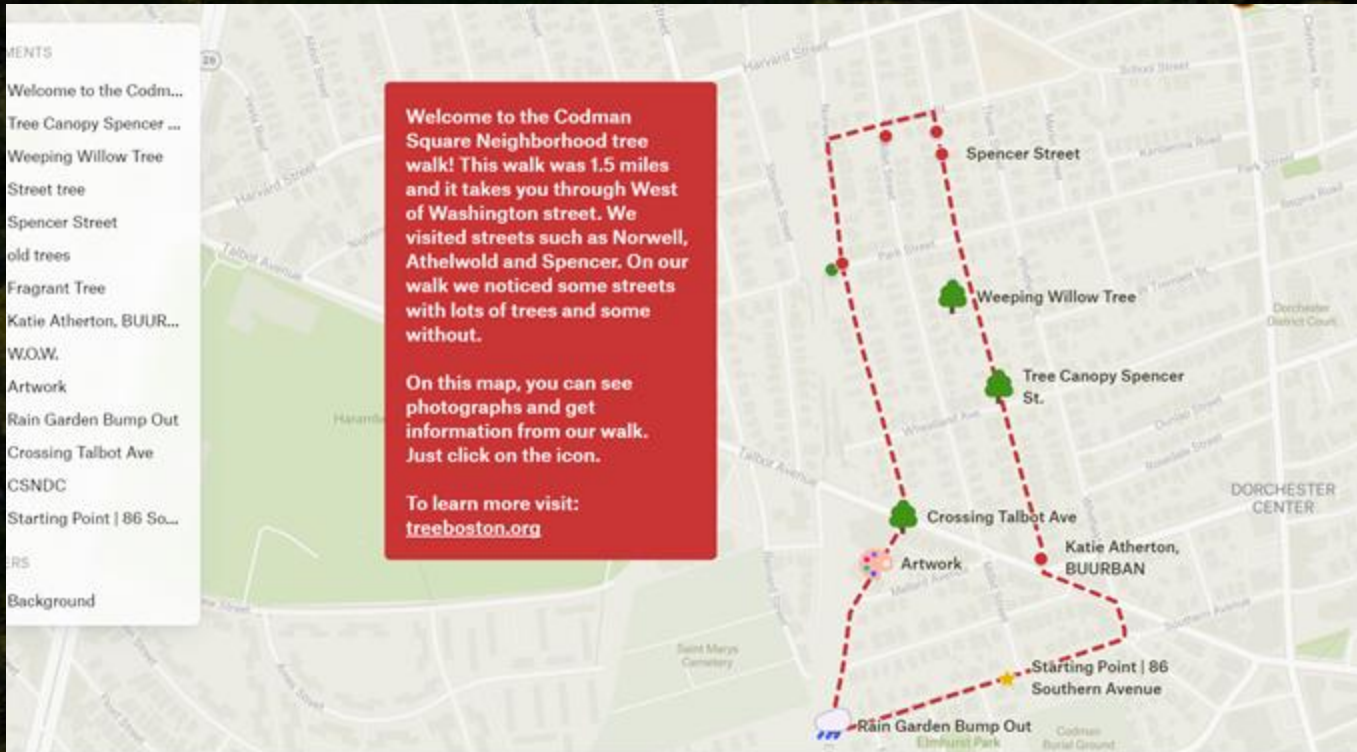
Invite members and advertise and carry out neighborhood tree walks



Process: 5 phases

Phase 5: Sharing

Create an artifact, either digital or print, that provides a retelling of the neighborhood stories and the walk



Process: 5 phases

Phase 5: Sharing

Create an artifact, either digital or print, that provides a retelling of the neighborhood stories and the walk



Reflection

- Partnership coordination takes time – give it the time it deserves
- Maintain clear expectations and lines of communication at all times
- Community members have powerful narratives and are eager to share, learn, & engage
- We all have stories, but they need trusted space to emerge: sharing them provides entry point to connect and learn
- Everyone is busy – respect others' busy schedules, especially working families
- Provide multiple opportunities and ways to engage, from language accessibility to reflection time
- All communities value their trees for vibrancy and the meaning and sustainability they provide to residents





Thank you

David Meshoulam & Jerel Ferguson

Speak for the Trees, Boston

✉ david@treeboston.org

✉ jerel@treeboston.org



Food and Agriculture
Organization of the
United Nations



d.



POLITECNICO
MILANO 1863



2nd **World Forum on Urban Forests**

2023



**World Forum on
Urban Forests**



2nd World Forum on Urban Forests

Washington DC, 2023

Introducing a Human-Centered Planting Metric



Presented by

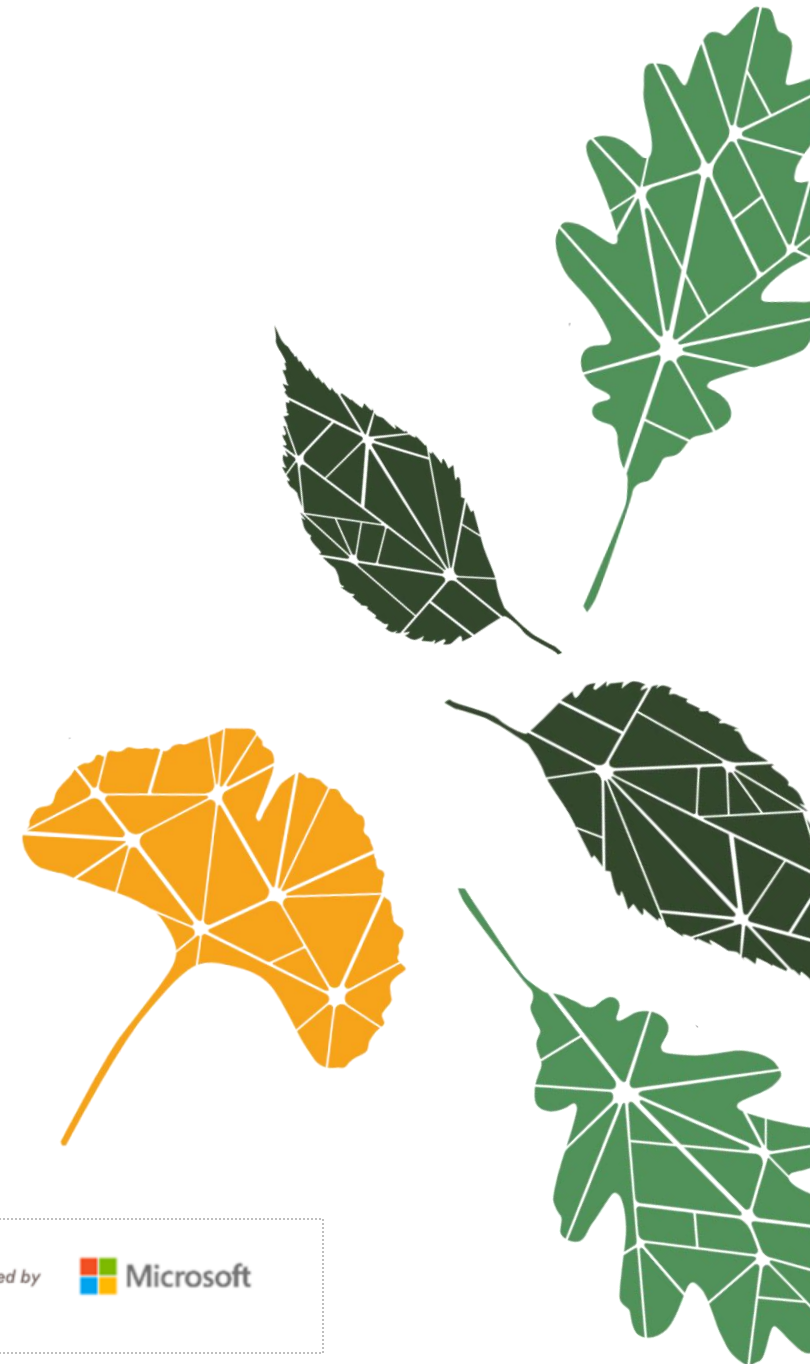
Rachelle Lim

City Forest Credits

In Collaboration with



Supported by

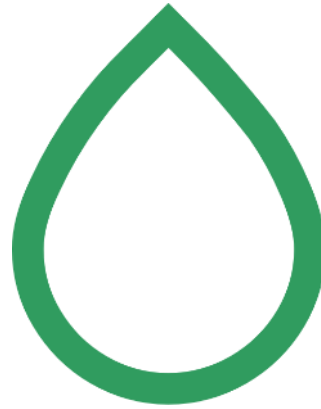




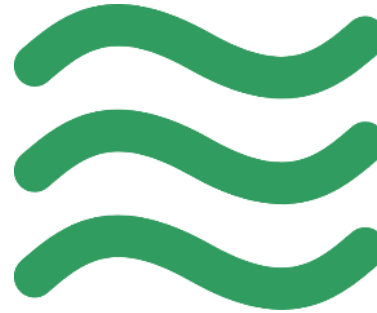
Quantified Ecosystem Co-benefits



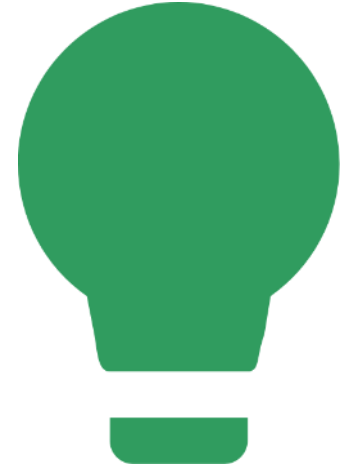
Carbon
Dioxide



Rainfall
Interception



Air
Quality



Energy
Savings

e.g., i-Tree tools



2nd World Forum on Urban Forests

Washington DC, 2023





Positive Health & Social Impacts of Trees

Reducing Harm

- Improve air quality
- Protect from UV
- Provide thermal comfort
- Reduce crime

Restoring Capacities

- Restore attention
- Improve mental health
- Reduce physiological stress
- Improve clinical outcomes

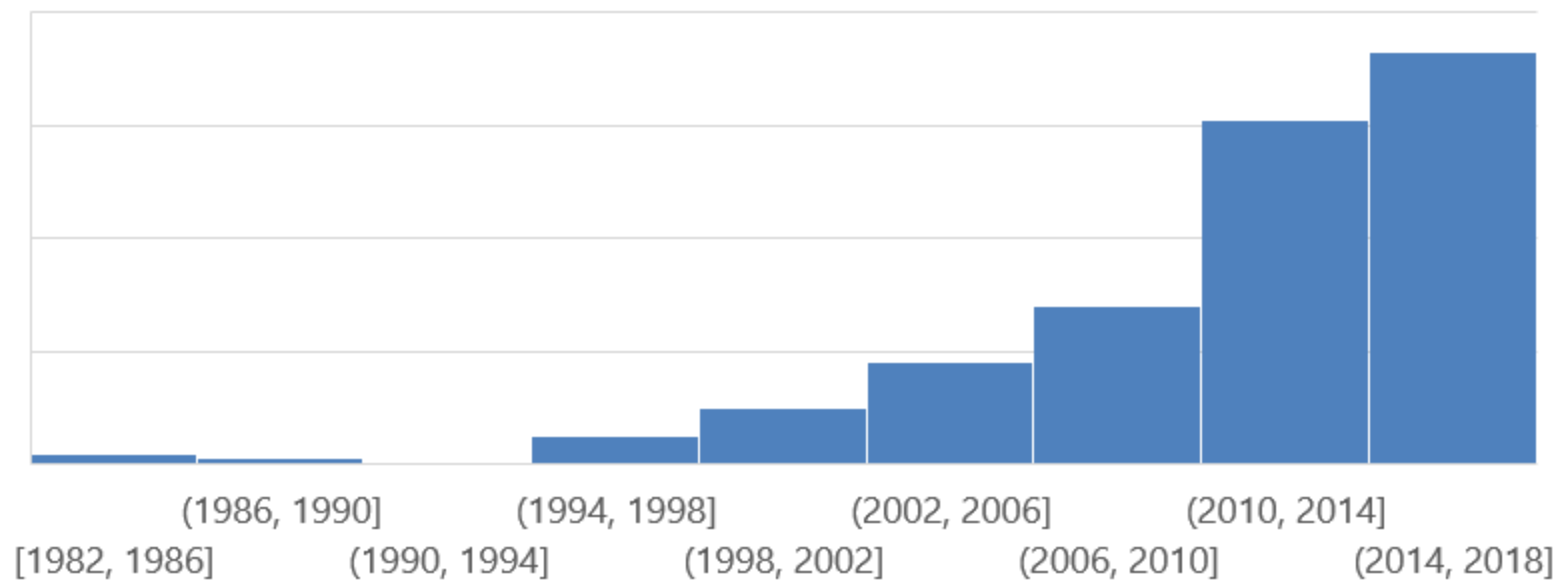
Building Capacities

- Improve birth outcomes
- Strengthen immune system
- Promote active living
- Improve cardiovascular function
- Strengthen social





Studies on Human Health and Trees



Data adapted from Wolf et al., 2020





The Human-Centered Metric



Carbon
Dioxide



Rainfall
Interception



People
Impacted



Air
Quality



Energy
Savings



**2nd World Forum on
Urban Forests**

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Nature-Based Solutions Program

Tree Planting and Restoration Projects



in data center communities around the world

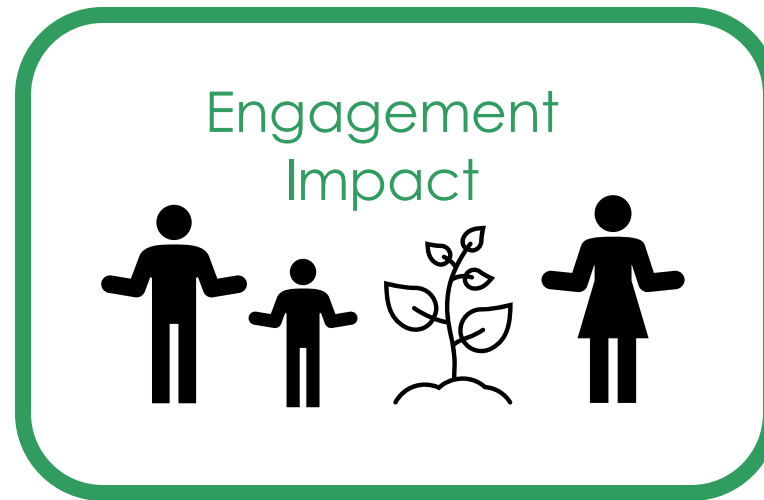


Supported by



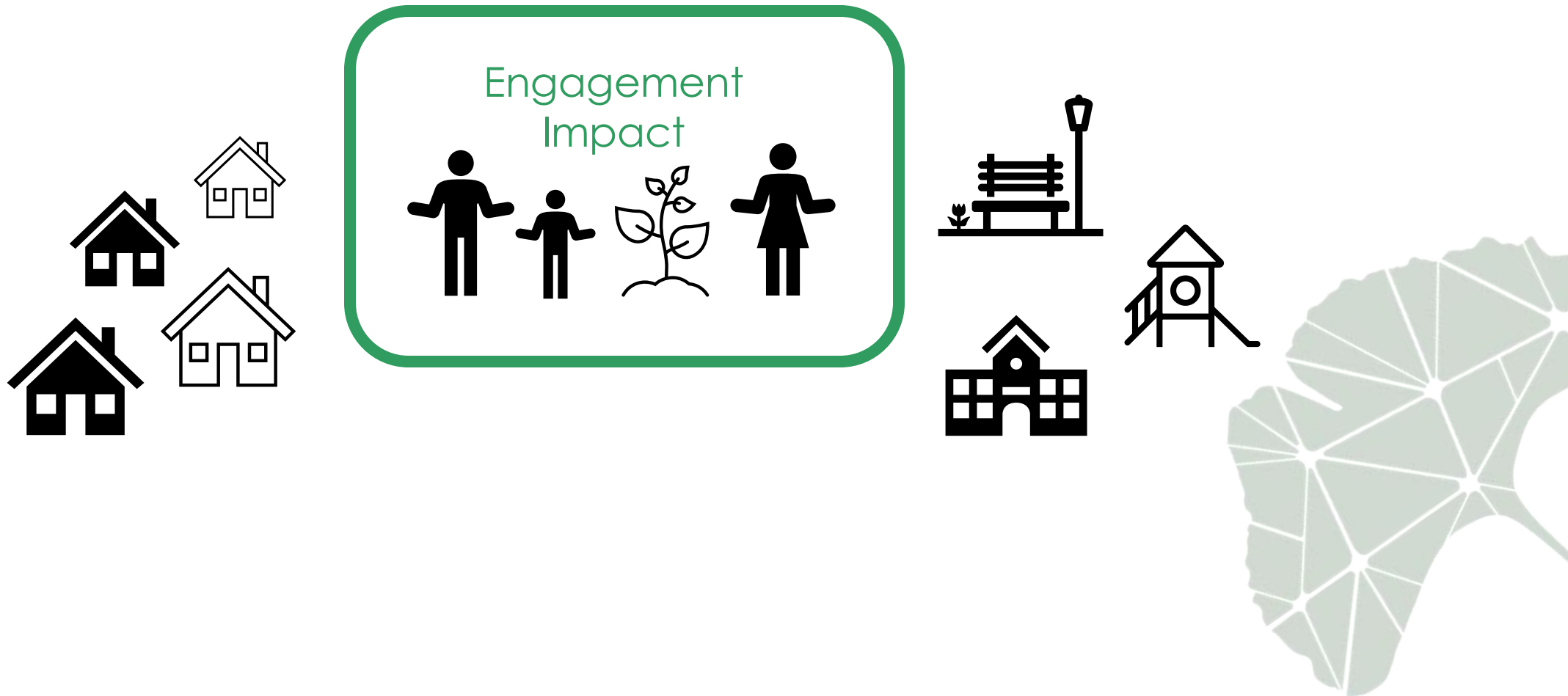


Who are the beneficiaries of a tree planting project?





Who are the beneficiaries of a tree planting project?



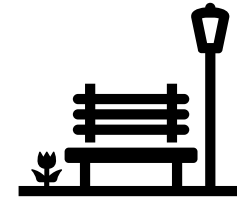
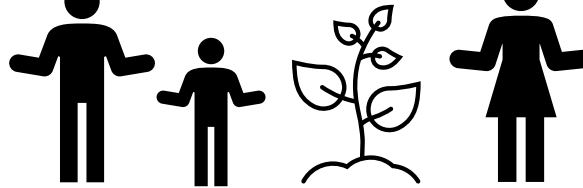


Who are the beneficiaries of a tree planting project?

Proximity
Impact



Engagement
Impact





Who are the beneficiaries of a tree planting project?

Proximity
Impact



Engagement
Impact



Sustained
Impact



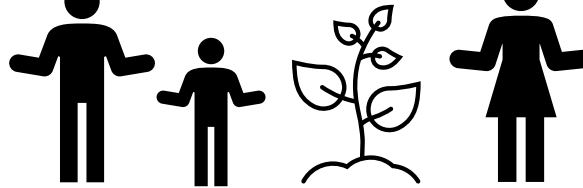


Who are the beneficiaries of a tree planting project?

Proximity
Impact



Engagement
Impact



Sustained
Impact



Extended Impact



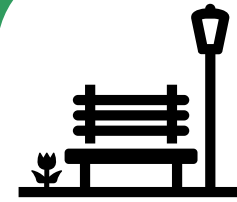


Human-Centered Metric

Proximity
Impact



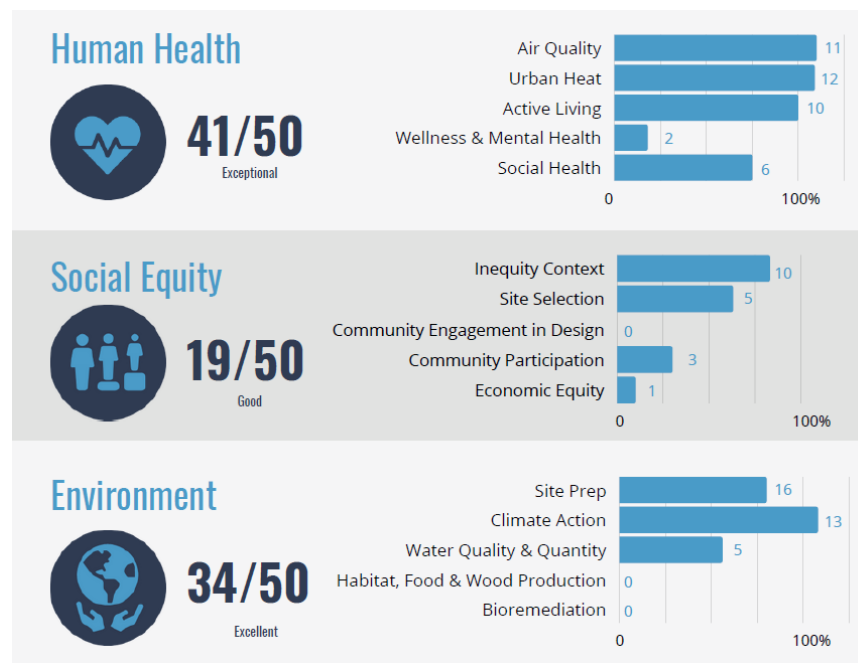
People
Impacted



Sustained
Impact

Methodology

What are the impacts?

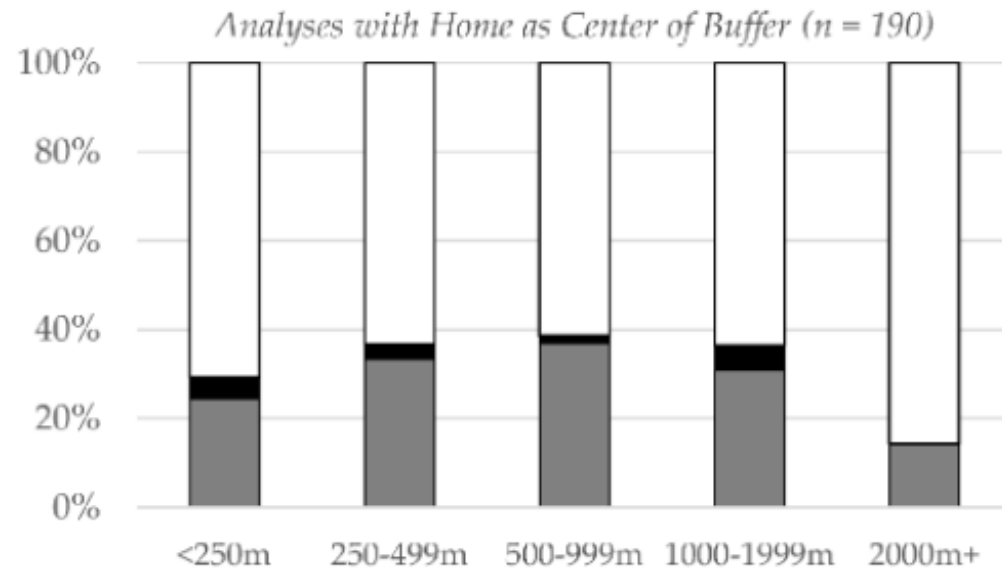


90 impacts & indicators



Methodology

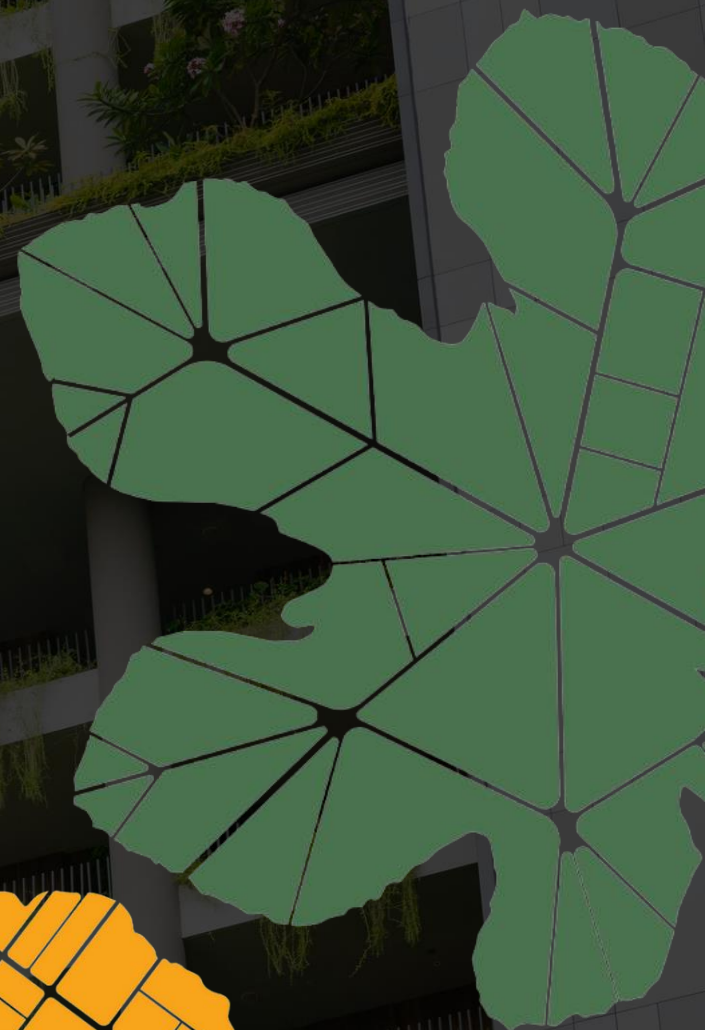
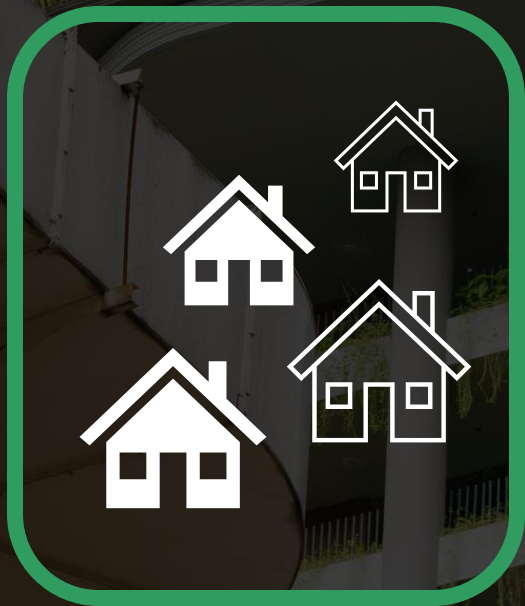
At what scale & threshold do they operate?



Browning & Lee, 2017

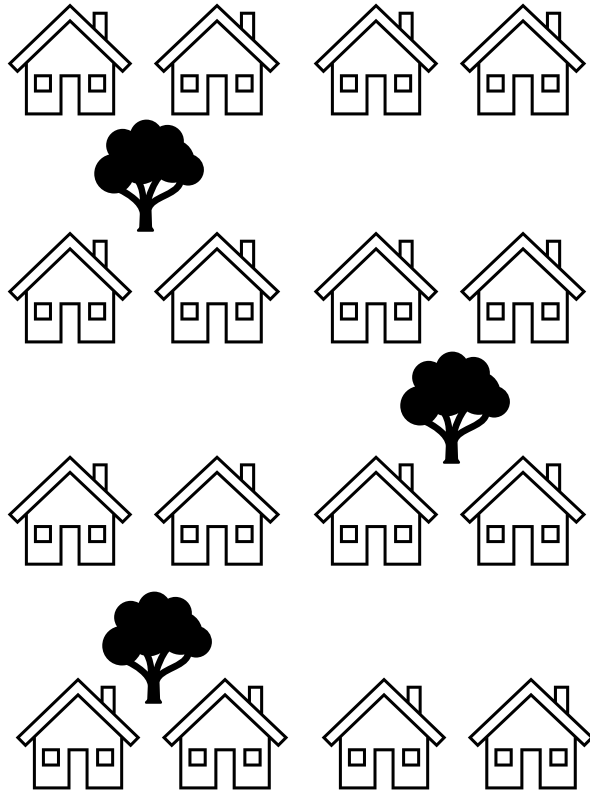


Proximity Impact



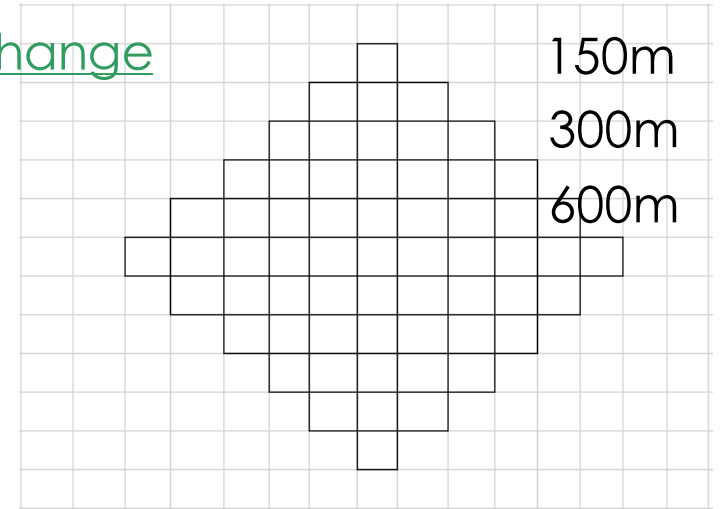
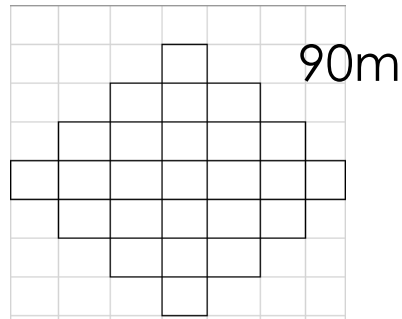


Proximity Impact Methodology



□ 30m

Canopy Change



Mortality Rate

Population Data

= Number of People Impacted





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Blacktown, Australia Tree Planting Project



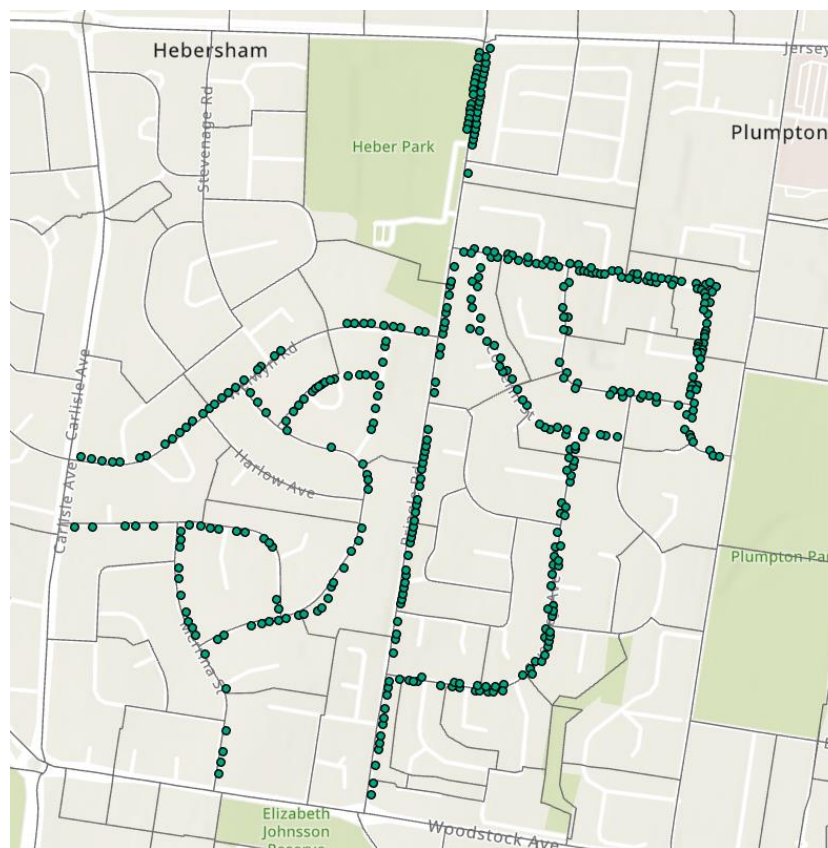
Blacktown
City Council



Supported by



400 street trees





Blacktown, Australia Tree Planting Project



Supported by  Microsoft

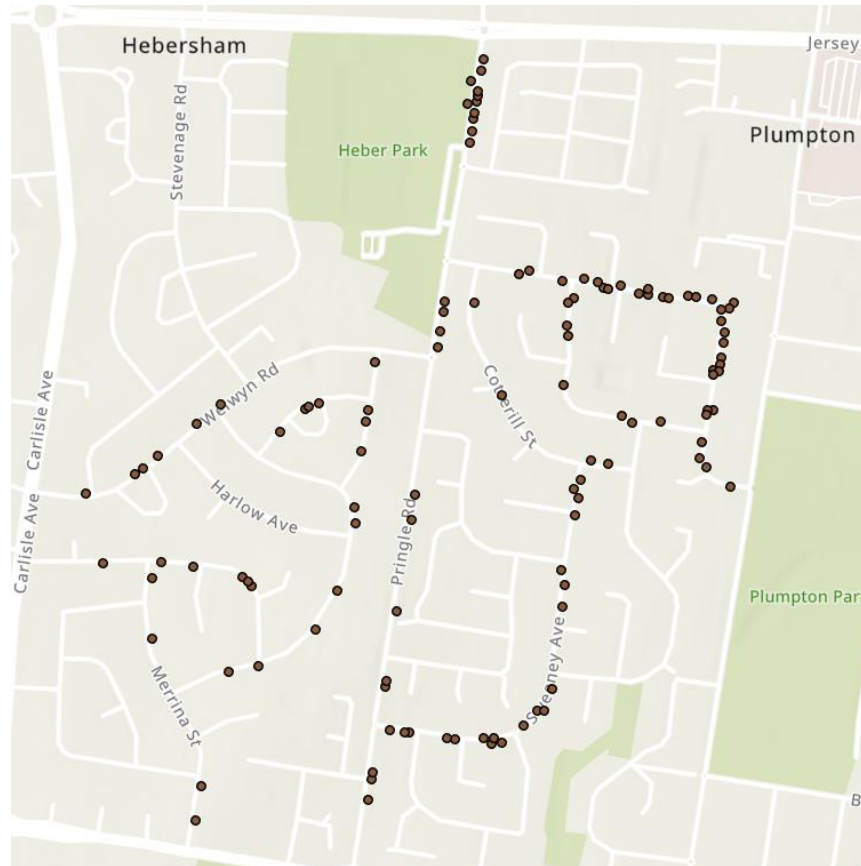
400 street trees

Survival Rate

30%

120 street trees

600sqft of tree canopy





**2nd World Forum on
Urban Forests**

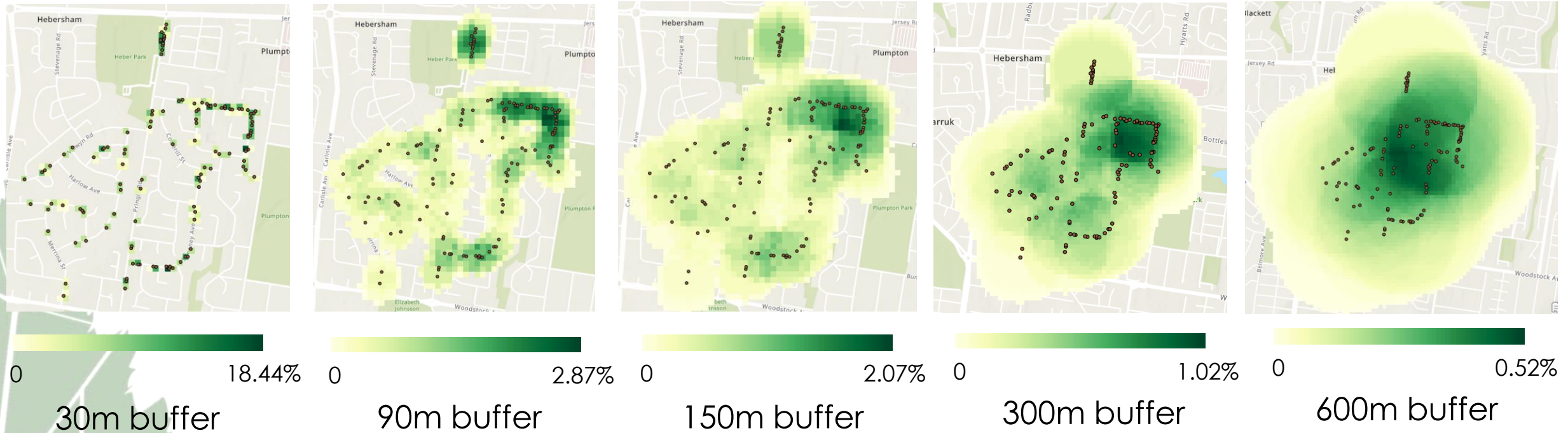
Washington DC, 2023

Blacktown, Australia Tree Planting Project



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Estimated Future Canopy Change





Blacktown, Australia Tree Planting Project



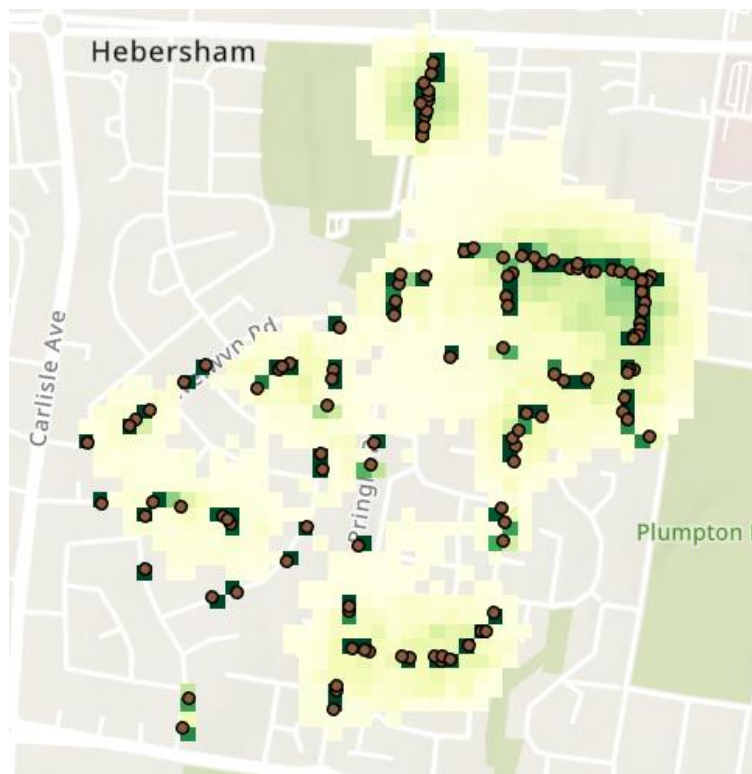
Blacktown
City Council



Supported by  Microsoft

Estimated Future Canopy Change

Maximum canopy
change of at least
0.5% across 30m,
90m, 150m, 300m,
or 600m scales



0.5

18.44%

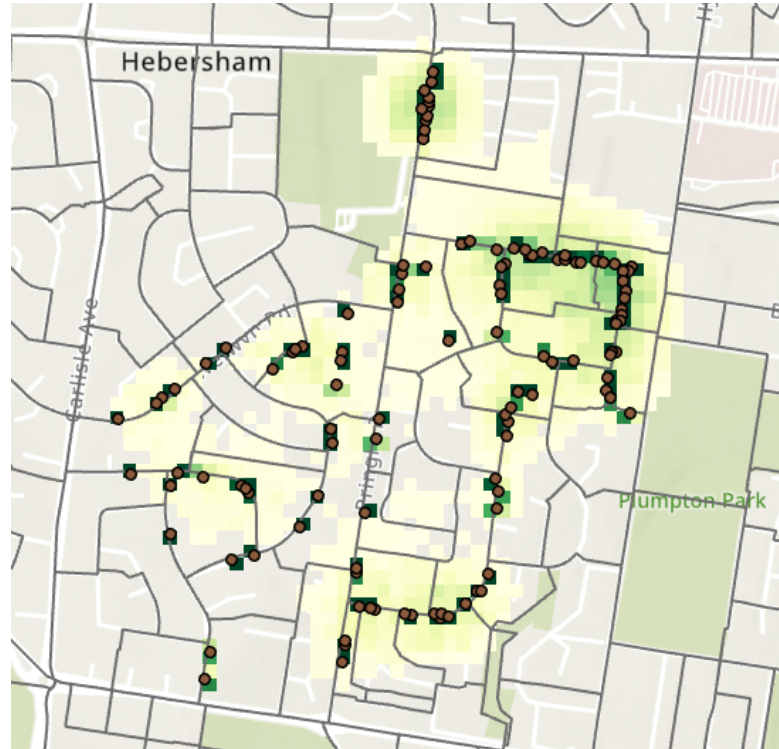


Blacktown, Australia Tree Planting Project



Estimated Future Canopy Change

Areal
interpolation
with census
block data to
understand
number of
people
impacted



0.5 18.44%

Just one
of many
possible
scenarios

....

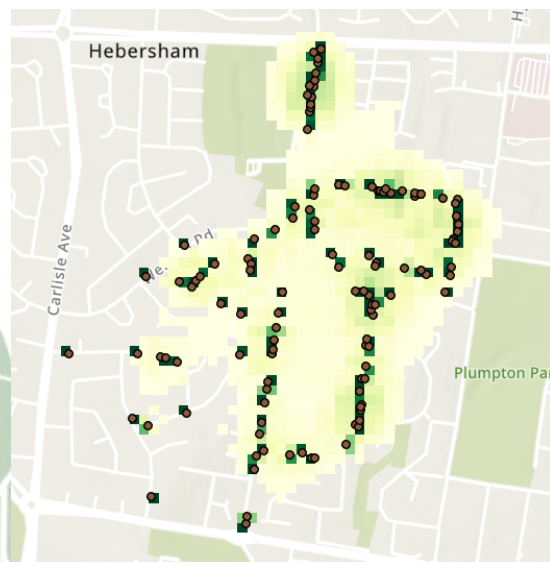
Blacktown, Australia Tree Planting Project



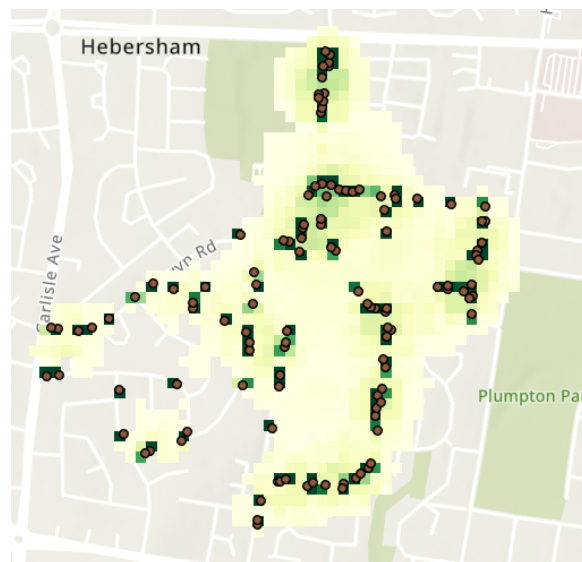
Supported by  Microsoft

Estimated Future Canopy Change

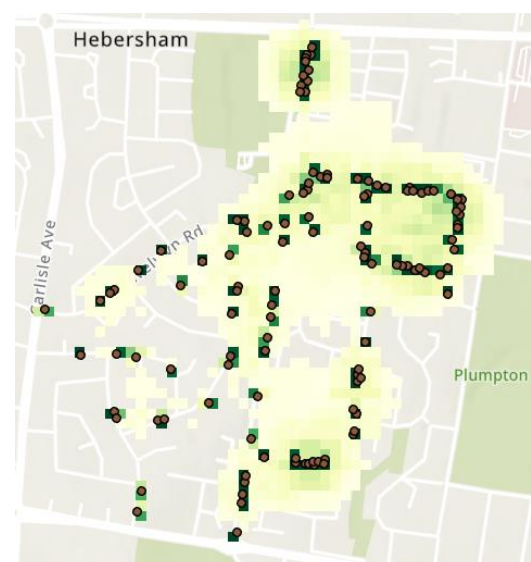
Repeated analyses of 30% random samples...



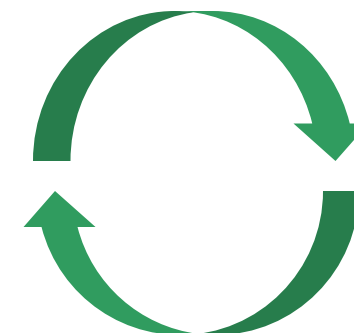
0.5 18%



0.5 21.11%



0.5 18.67%





Blacktown, Australia Tree Planting Project



Blacktown
City Council



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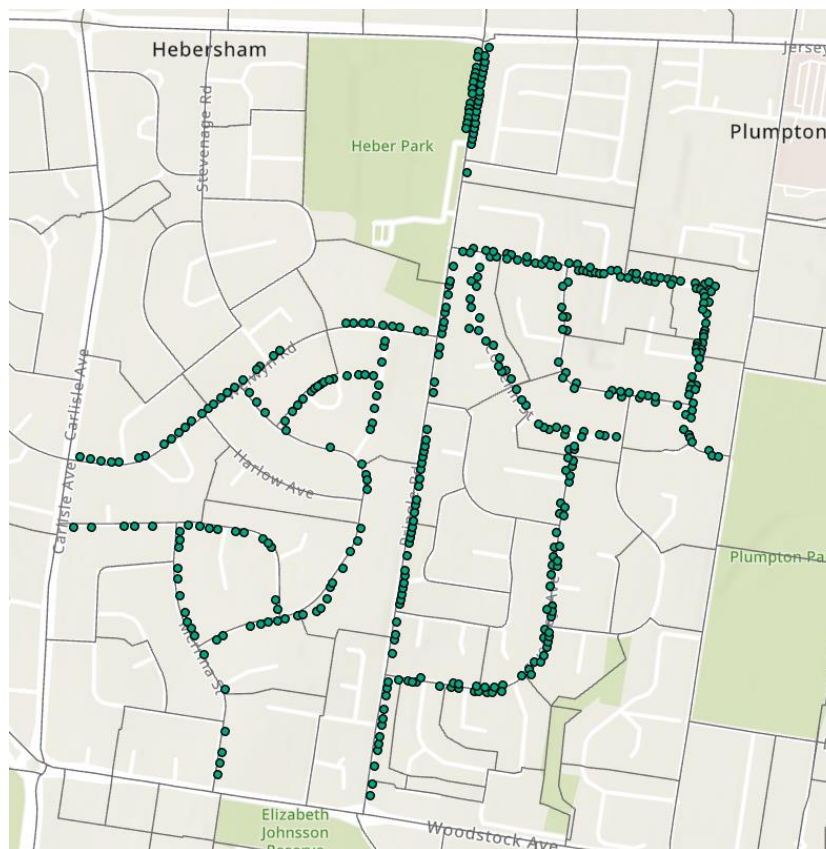
400 street trees

30% survival

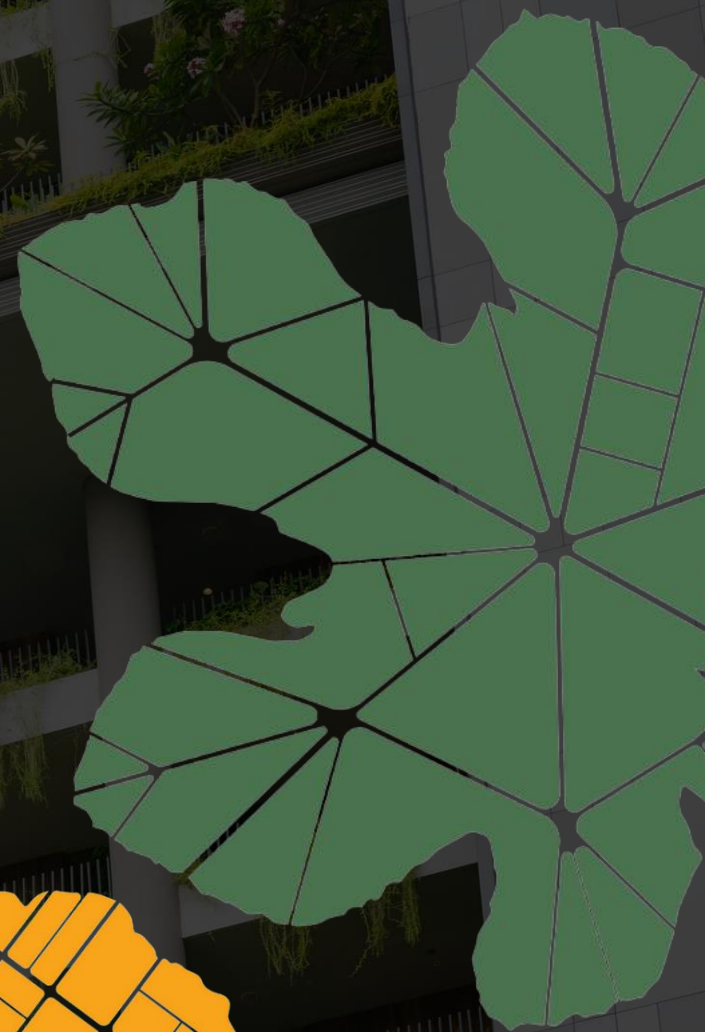


$3,100 \pm 100$

People Impacted



Sustained Impact





Chicago, IL, USA Tree Planting Project



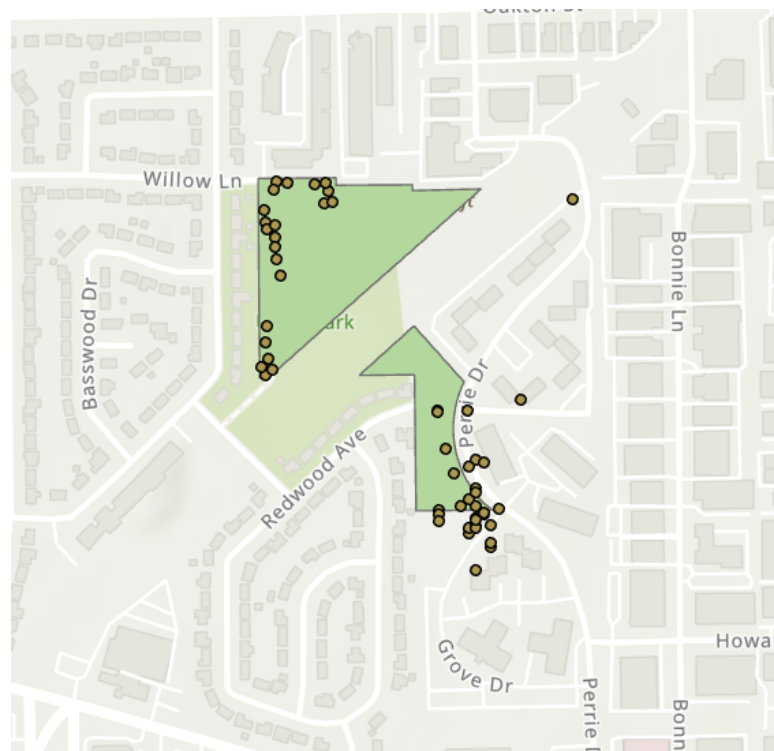
CHICAGO
REGION
TREES
INITIATIVE



Supported by



57 trees at Udall Park
in Elk Grove Village





Chicago, IL, USA Tree Planting Project



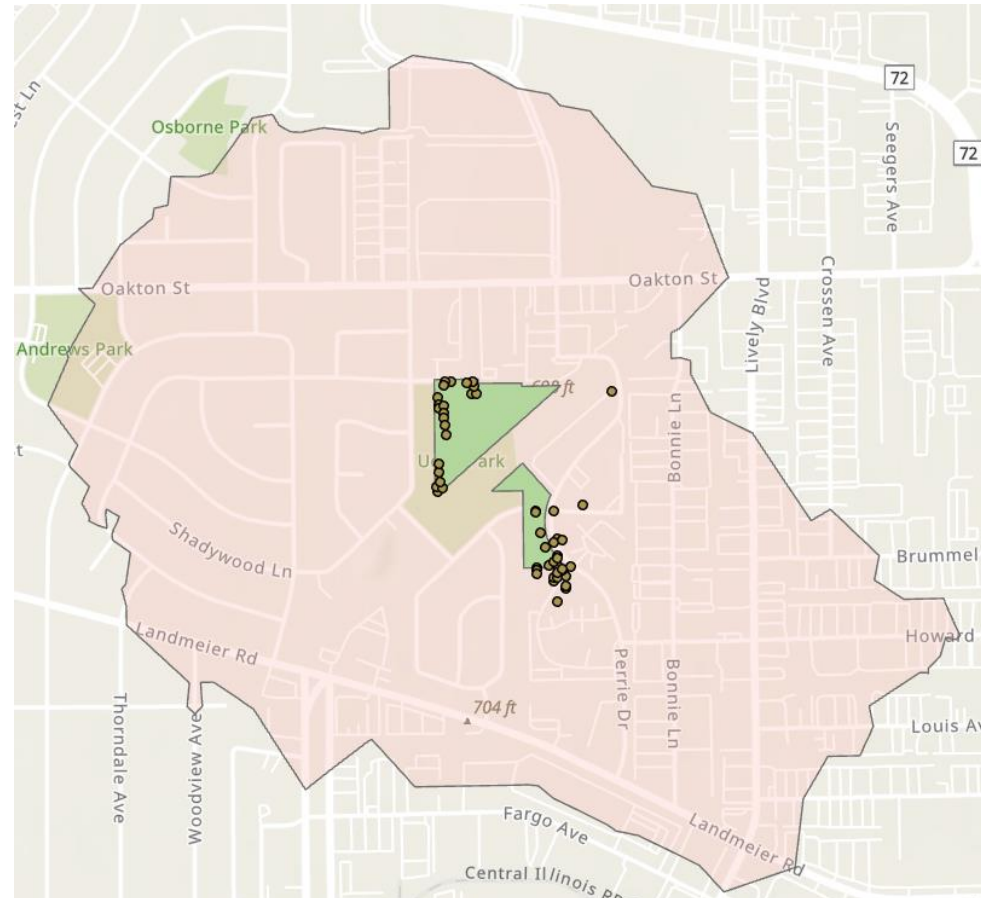
CHICAGO
REGION
TREES
INITIATIVE



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- Trust for Public Land
ParkServe:
10 Minute Walk Network
Buffer
ParkIndex
(Kaczynski et al., 2020)
10 Minute Walk Network
Buffer
- Model park attributes:
 - Size: 9.53 acres
 - Park quality score: 68.65
 - Average probability of park visit:
32.15%





Chicago, IL, USA Tree Planting Project



CHICAGO
REGION
TREES
INITIATIVE



Supported by

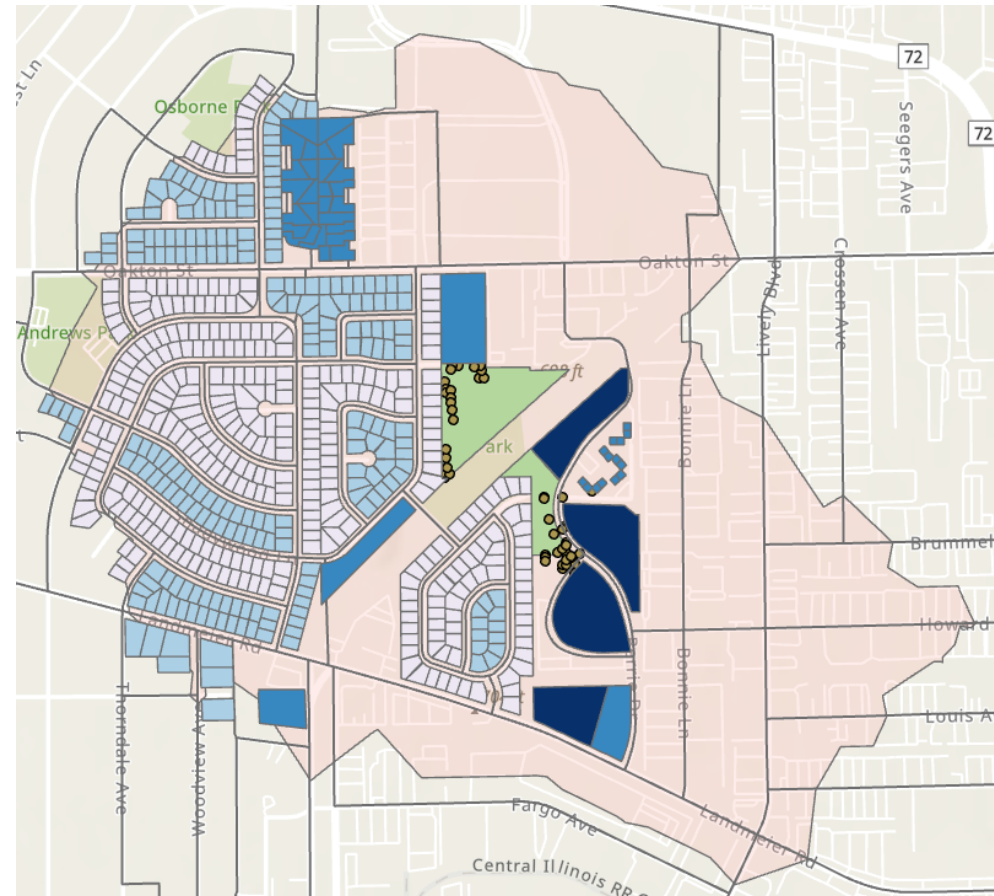


Sustained Impact



Approx. 1000

People Impacted





Chicago, IL, USA Tree Planting Project



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REGION
TREES
INITIATIVE



American
Forests™

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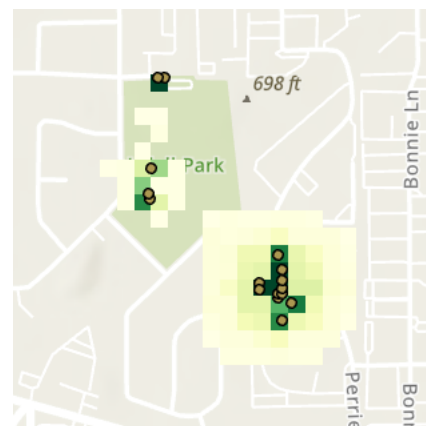
Proximity Impact



200 ± 100

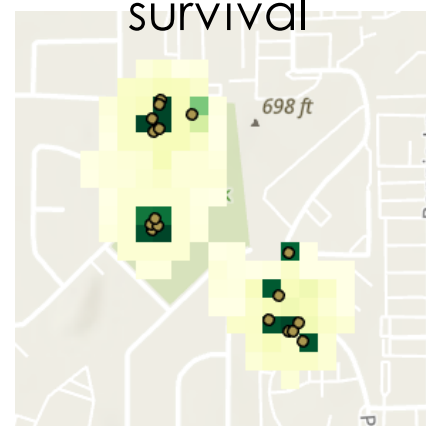
People Impacted

Repeated canopy change analyses of 30% survival



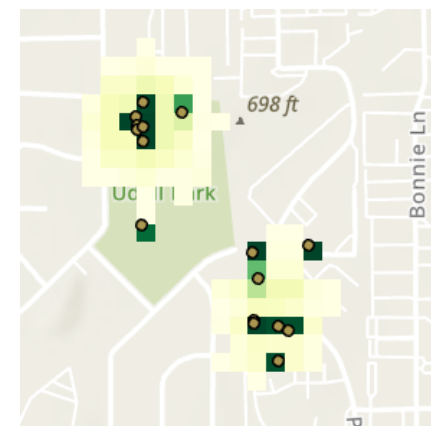
0.5

22.8%



0.5

16.78%



0.5

12%



Chicago, IL, USA Tree Planting Project



CHICAGO
REGION
TREES
INITIATIVE



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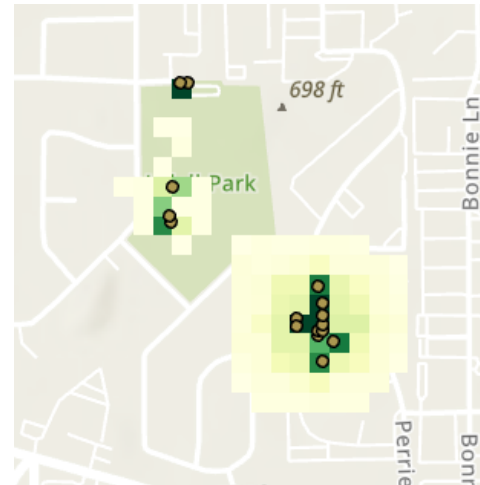
Proximity Impact



200 ± 100

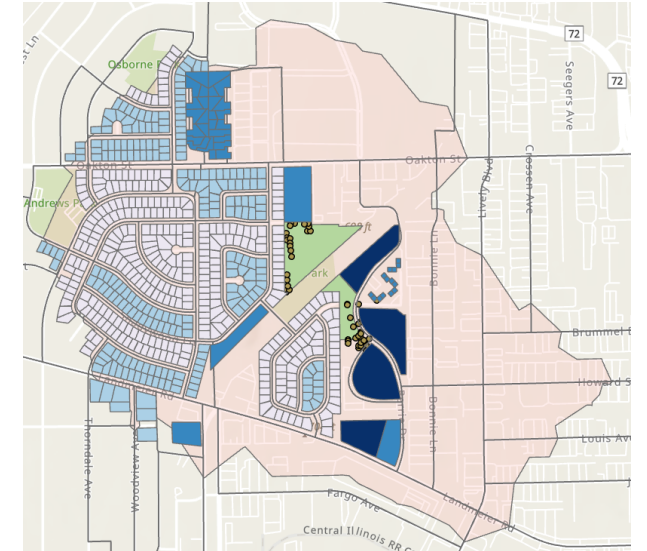
People Impacted

=



Population estimated to be
impacted by canopy
change

-



Estimated park visitors
(assuming equal
distribution)



Chicago, IL, USA Tree Planting Project

57 trees at Udall Park



Approx. 1,200

People Impacted

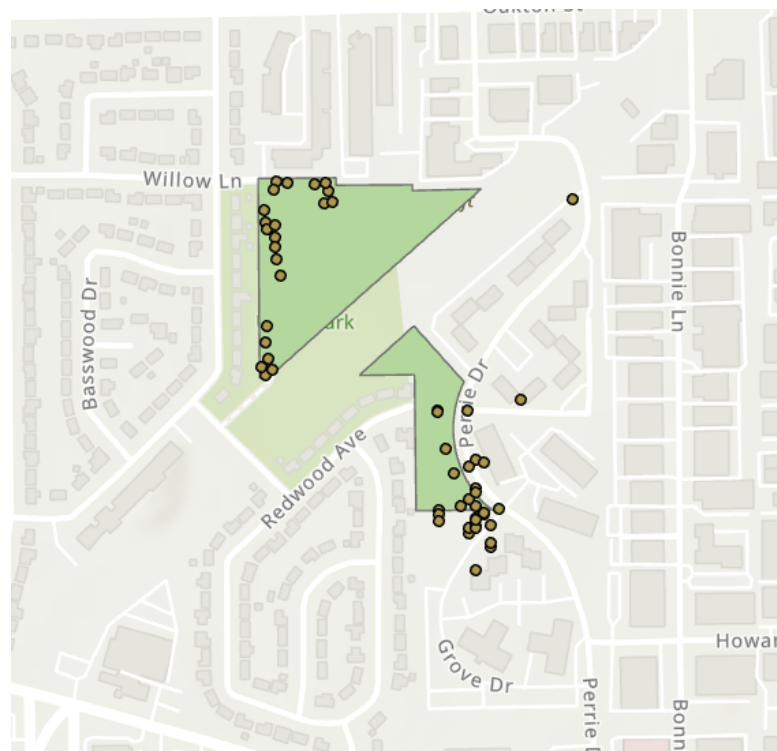


CHICAGO
REGION
TREES
INITIATIVE



American
Forests™

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Path forward

- Continue to iterate on methodology
- Long-term vision: open-source tool





Thank you

Rachelle Lim | City Forest Credits

✉ rachelle@cityforestcredits.org

Acknowledgements:

Dr. Kathleen Wolf, University of Washington
Holly Beale, Microsoft
American Forests
One Tree Planted
Society for Ecological Restoration
Chicago Region Trees Initiative
Blacktown City Council



Food and Agriculture
Organization of the
United Nations



Arbor Day
Foundation



POLITECNICO
MILANO 1863



International Society of Arboriculture



Smithsonian



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2023



**World Forum on
Urban Forests**



Healing Power of Nature: Forest Therapy in Action

Won Sop Shin, Ph.D.
Chungbuk National University, Korea
Tamberly Conway, Ph.D.
Conservation Conexion



FOREST THERAPY

Human Origin



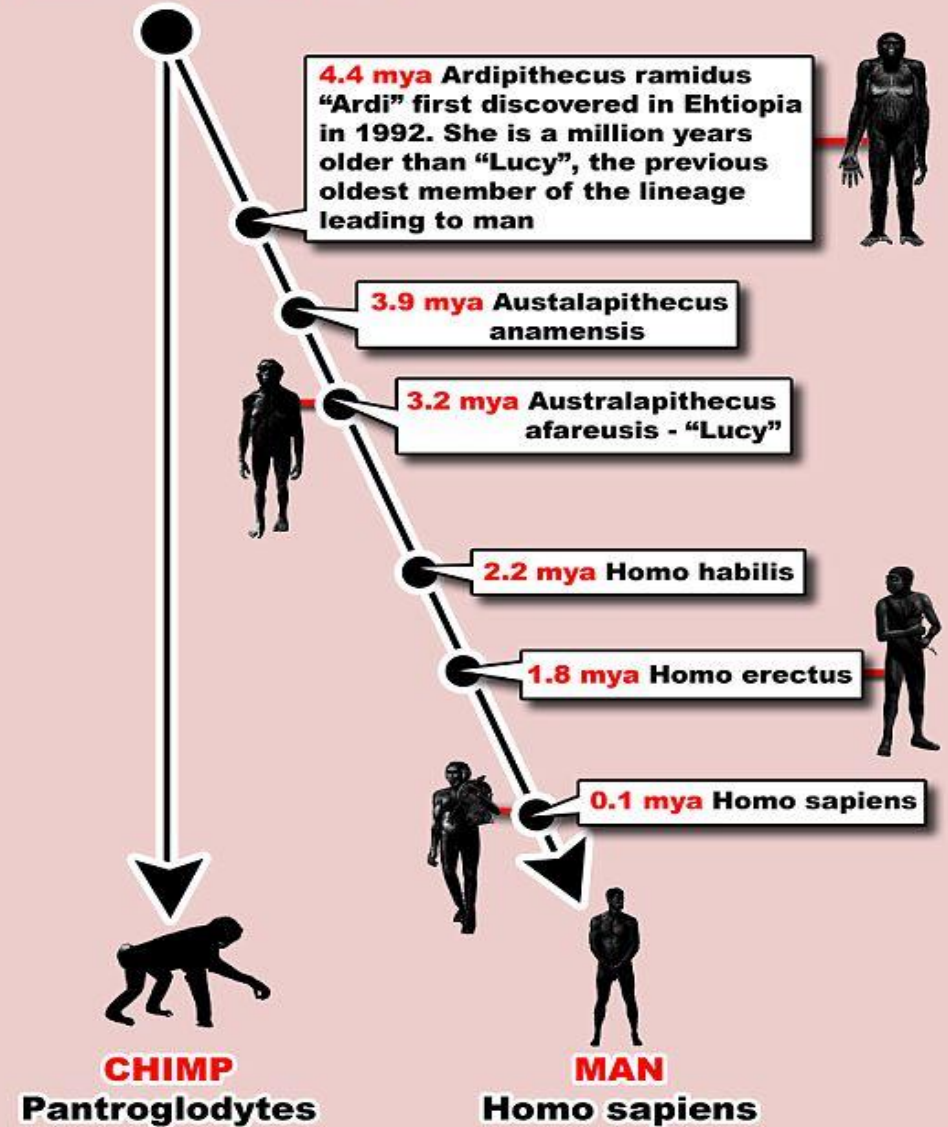
Background

bio·phil·ia
(bahy-oh-fil-ee-uh) noun

an innate and
genetically determined
love for the natural world
felt universally by humankind.

LAST COMMON ANCESTOR OF MAN AND CHIMP

6 - 7 MILLION YEARS AGO?



Background



Under the background of
“BIOPHILIA”

1. Attention Restoration Theory



FOREST THERAPY



Premising to fulfil
“BIOPHILIA need”

Background

Forest has been deeply involved in human origin, human-nature, and identity, beyond health and quality of life.

Physiological	Positive effect on human physical function and/or physical health (O'Brien and Forster, 2017; Lee and Shin, 2019; Yi et al., 2019; Berto, 2014; Lee et al., 2014; ...)
Psychological	Positive effect on human mental processes and emotions (Oh et al., 2020; Hansen et al., 2017; Lee et al., 2017; Lee et al., 2011; Shin et al. 2010; ...)
Cognitive	Positive effect on human cognitive ability or functions as well as provision of educational opportunities in an outdoor and healthy environment (Kyu-Won Sim et al., 2018; RSPB, 2013; Shin et al., 2011; Shin et al., 2001)
Social	Positive effect on social skills, interactions, behaviors and lifestyle (Ambrose-Oij and O'brien, 2017; Yeon et al., 2019; RSPB, 2013; Maller, 2009; Shin et al., 2005; ...)
Spiritual	Positive effect on cultural and religious pursuits or spiritual well-being (O'Brien et al., 2017; Collins et al., 2014; Kenter et al., 2014; Laband, 2013; Chen-Hsuan Cheng and Monroe, 2012; ...)
Economic	Positive effect on local economy and employment, especially in smaller and remote mountain areas (Shin et al., 2017; Edwards et al., 2009; Hine et al., 2009)

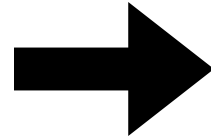


Forest Therapy in Korea: Some Accomplishments

SUCCESS OF FOREST RESTORATION



SUCCESS OF FOREST RESTORATION



“Miracle on the Han River”

SUCCESS OF FOREST RESTORATION



Forest Restoration :
A Path to Public
Health & Welfare

Why Did Forest for Human Health Policy Emerge in Korea?



1. Korea's urbanization and its shade

- Rapid urbanization
- Densely populated country
- Longest working hours
- Highest competition, etc.

2. Super aged society

- Pressure of medical finance
- Preventive medicine

3. Rich forest resources

Progress of Forest Welfare/Therapy Policy

2013

Proclamation ceremony for vision of forest welfare
Comprehensive forest welfare plan

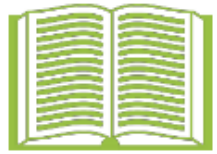
2015

Enactment of 「Act on Forest Welfare Promotion」

2016

Establishment of 「Korea Forest Welfare Institute」

New Legislation on the Forest Welfare



Forest Welfare Promotion Act in effect (March in 2016)

To contribute to improve people's health and happiness through various forest welfare services

➡ The **world's first case of legislation** to specify 'forest welfare'



5-year
Plan



Forest
Welfare
Services



Forest
Welfare
Complex



Committee



Specialized
Agency

Establishment of Specialized Agency



Korea Forest Welfare Institute (April in 2016)

: To promote forest welfare and to make contribution to the improvement of health and quality of life and the pursuit of happiness by providing diverse and well-organized forest welfare services.



Forest Welfare
Facilities



Tailored
Services



Professionals
Education



Programme
Development



Forest Welfare/Therapy for life cycle service

**“From cradle to grave, life with
forests”**

Therapeutic Benefits of Forest (Conclusion)

- Forests may provide opportunities which foster the establishment of more efficient and active behavior
- Thereby enhancing mental health and psychological functioning
- Many previous research have examined the therapeutic value of forest
- Most of studies appraised the values of the forest-related clinical programs in improving the effective performance of delinquents; of in- and out-patients

Even previous studies support the health and QOL effects, Forest Therapy now need to expand it's philosophy more fundamental purpose of we Human Being

Memorandum of Agreement (MOA) signing

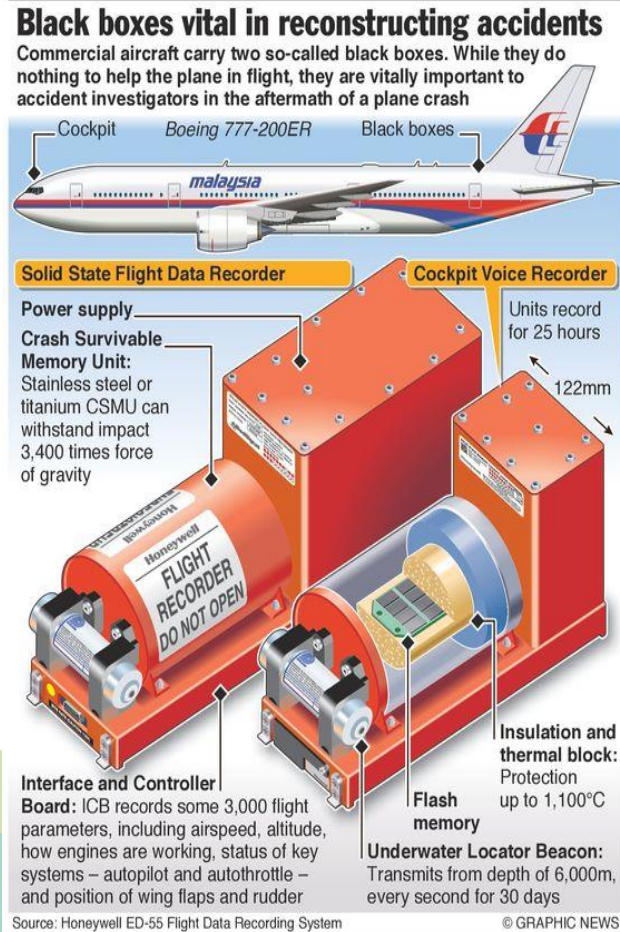


Opportunities and avenues for continued collaboration

- **Co-presentations at national/international conferences**
 - International Forest Therapy Conference, Vancouver, British Columbia, 2022
 - Women's Forest Congress; Minneapolis, MN, 2022
 - World Forum on Urban Forests; Washington, DC, 2023
 - International Union of Forest Research Organizations (IUFRO); Stockholm, Sweden, 2024
- **Research and Development collaboration**
 - Improve data collection techniques
 - Collaborate around technology development
 - Engage in collaborative research endeavors



Challenges



01

- Need more to identify “What beneficial outcomes occur to an individual during one’s experience with forests, especially spiritual aspects and purpose of life

02

- How might this interaction with forest benefit the shaping of a developing public health and well-being

03

- Does an individual’s experience of forest offer an enriched perspective on life

The background of the image is a dense, repeating pattern of watercolor-style leaves and branches. The leaves are in various shades of green, from light lime to deep forest green, and are scattered across the entire frame. Some branches are more prominent, showing small, oval-shaped leaves, while others are fainter. The overall effect is a soft, natural, and textured backdrop.

THANK YOU

2nd **World Forum on Urban Forests**

2023



**World Forum on
Urban Forests**



2nd World Forum on Urban Forests

Washington DC, 2023

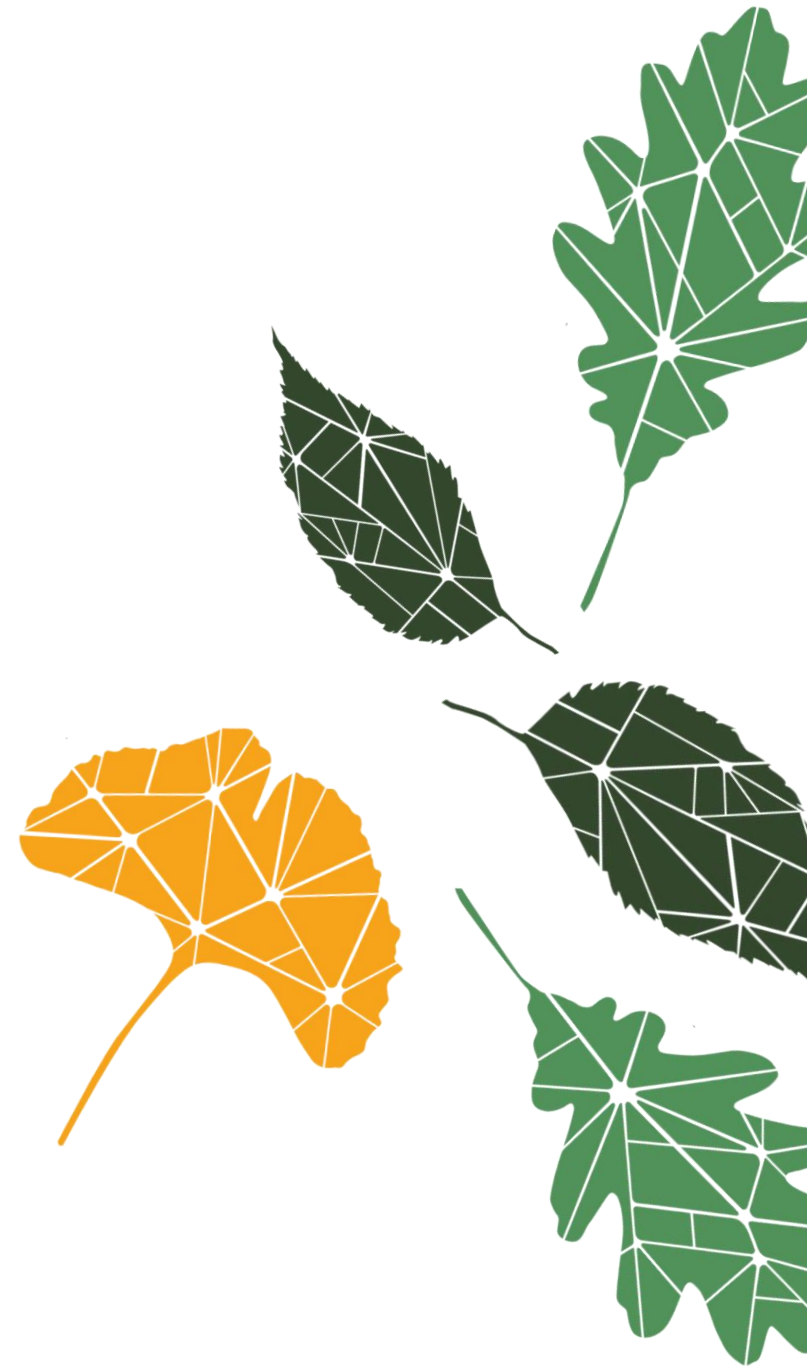
Type of users: pathways towards our
health and well-being



Presented by

Dr. Cinnamon Dobbs
Department of Natural Resources and the
Environment

University of Connecticut





2nd World Forum on Urban Forests

Washington DC, 2023



Eisenman et al. 2019
DOI: [10.1016/S2213-2600\(19\)30193-6](https://doi.org/10.1016/S2213-2600(19)30193-6)



2nd World Forum on Urban Forests

Washington DC, 2023



Forest Service
U.S. DEPARTMENT OF AGRICULTURE

URBAN AND COMMUNITY FORESTRY GRANTS

\$1.5 Billion to Expand Tree Canopy and Access to Nature

100% of Benefits Will Flow to Communities in Greatest Need

Urban and Community Forestry Grants, authorized under the Inflation Reduction Act, provide funding to community-based organizations, Tribes, State and local agencies, public colleges and universities, and non-profits working to provide equitable access to trees and nature and the benefits they provide to urban communities.



Investing in a Healthier Future for America

385 grants were awarded to 50 states, 2 territories, 3 U.S.-affiliated Pacific Islands, and multiple Tribal communities with 1 flowing to those in

Expanding Tree Canopy in our Communities

Benefiting cities, towns, villages, non-profit organizations, Tribes,

The Benefits of Trees in our Communities

Trees mitigate extreme heat, conserve energy, provide shade, absorb storm water, create

Confronting the Growing Threat of Extreme Heat and Climate Change

July 2023 was the hottest month on record in communities around the country.

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SENEGAL: Ecolibri to plant an urban forest of 1,300 trees in Dakar

By Inès Magoum - Published on June 8 2021 / Modified on June 8 2021



The environmental organisation Ecolibri has just launched a project to plant an urban forest of 1,300 trees in Dakar, the capital of Senegal. The project, supported by the European Union (EU), aims to accelerate reforestation in order to preserve the environment.



Uforest Innovation Challenge

Designing climatic refugia in Barcelona

Innovador y ambicioso programa dotará de 30 mil nuevos árboles a comunas con déficit de áreas verdes de la RM



ONE MILLION TREES WEBINAR

Greening our nation: Evolution of tree planting in Singapore



12 September 2020, 4 pm



Are we providing for all?

Greening: distribution of tree cover, densities, diversity – biophysical phenomena

Equity: benefits that people received from trees – socio-cognitive phenomena

Recognizing if our greening is leading to the benefits most value by urban users might better support more just planning





Some evidence

- Differential patterns of value for nature relate to cultural, historical and contextual factors (Triguero-Mas et al. 2021, Neidig et al. 2023).
- Preferences on greens spaces differ by immigrant status and age group (Kabisch and Haase 2014).
- Woman and men differentially use, experience and share benefits from ecosystem services (Fortman et al. 2019).
- Lack of direct experience with nature can lead to alienation from nature (Soga and Gaston 2016).
- Greening can be related to the loss of place-specific culture and traditions because of gentrification (Lliso et al. 2022).
- Greening material practices and discourses have excluded marginalized voices producing environmental injustices (Kabisch and Haase 2014).





Where did we test this? Santiago (Chile)

- Population: over 7 million
- Environmental issues: air pollution, waste management, drought, climate change and lack of trees and green spaces, biodiversity (MMA, 2019)
- Inequities on urban forests distribution (<1 m²/inhab. to 40 m²/inhab.), abundance and access to GS (Dobbs et al. 2023)





What did we measure?

- Online survey = 2868 respondents (Netquest Ltda)
- Stratified by socioeconomic distribution of the population, and representing each municipality in the Region
- Age, gender, education, residence, type of residence
- Rate the importance of the following benefits and nuisances delivered by trees in urban areas (Cuan importante son los siguientes beneficios y externalidades negativas de los arboles urbanos?)
- Values on ecosystem services (5-point Likert scale): not important to very important



Can we distinguish groups of values for urban forest ecosystem services and disservices?

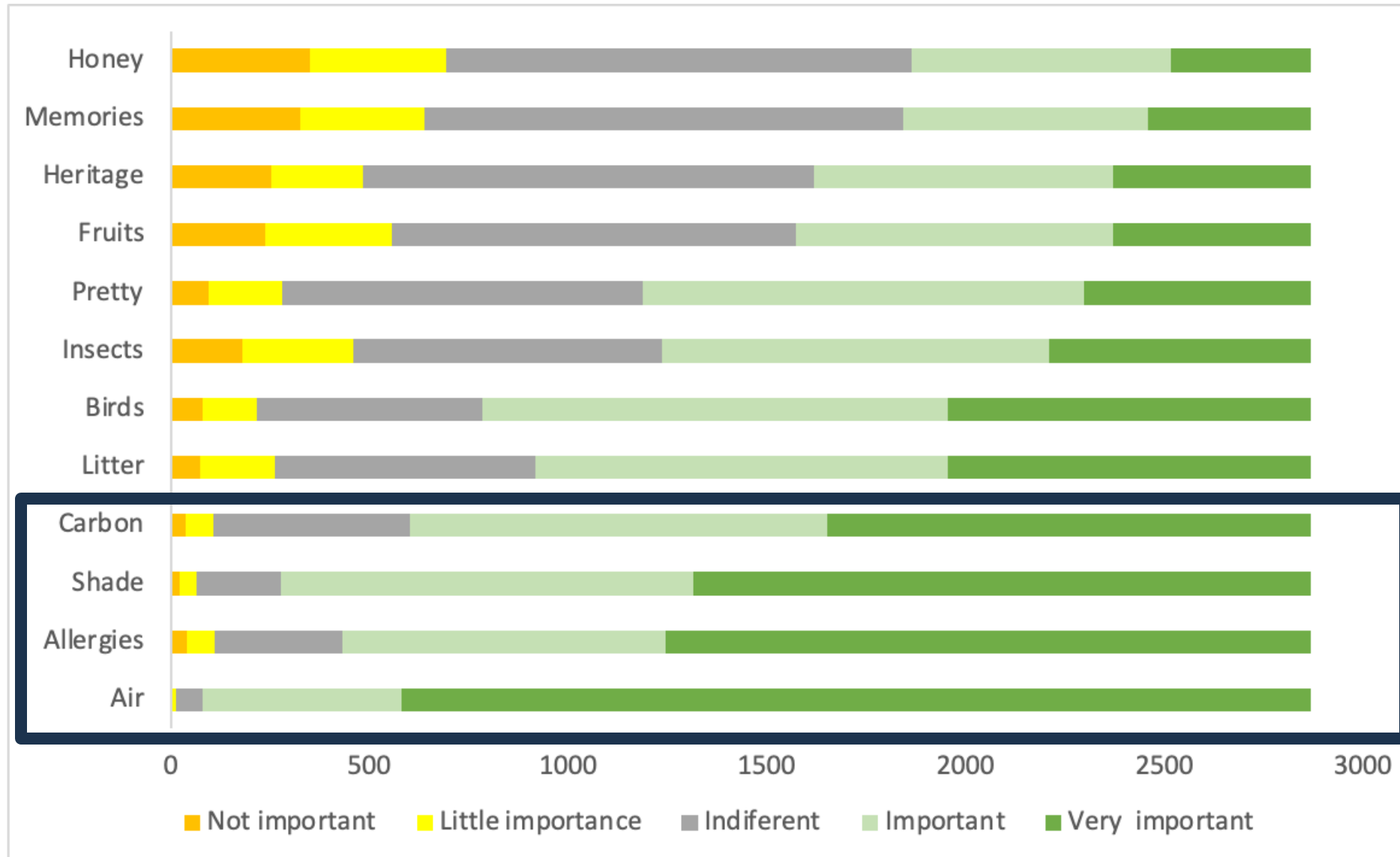
Latent Class Analysis
Respondents classified for the likelihood of importance towards groups of EESS





2nd World Forum on Urban Forests

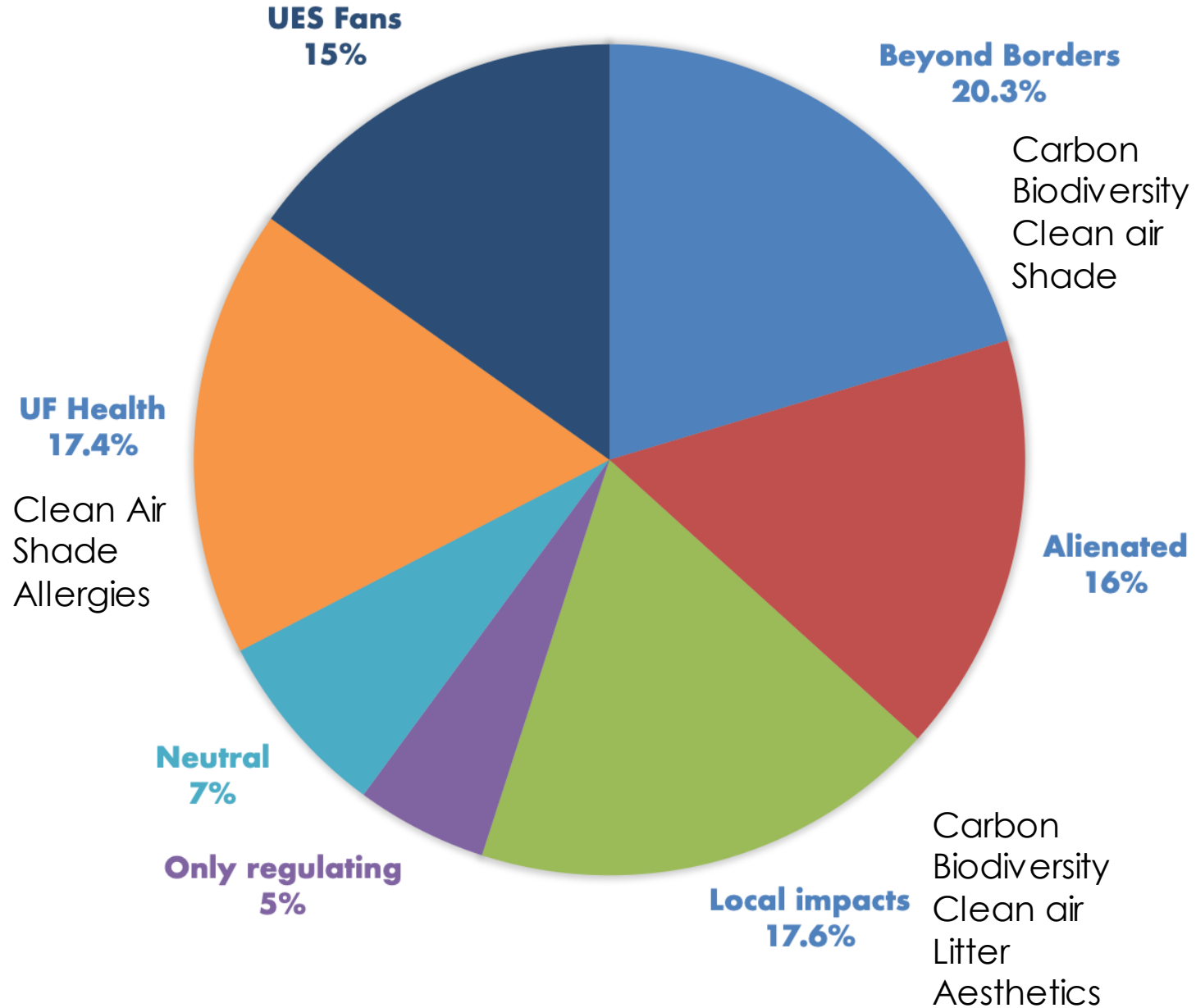
Washington DC, 2023





2nd World Forum on Urban Forests

Washington DC, 2023





Key messages

- Perspectives on urban forest varied among people living in the same region
- There is an agreement on values of urban forests EESS related to local environmental problems
- EESS with global impact are valued by less than 50% of the respondents
- Disservices were considered important to consider for urban forests for 50% of the respondents



Can we distinguish social and environmental drivers of values of the urban forest?

GLM with sociodemographics, municipality of residence, work with nature

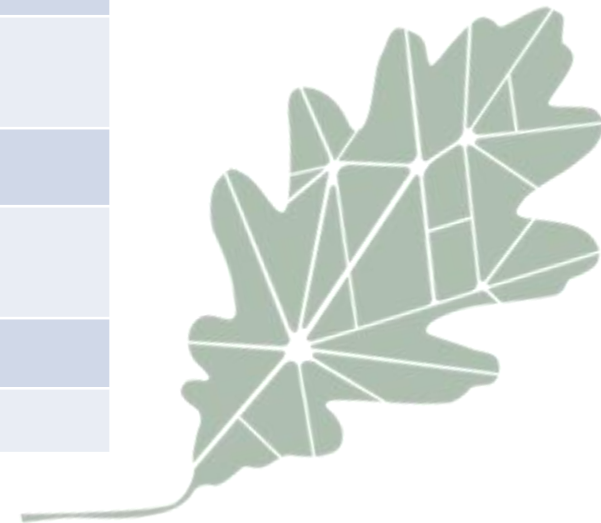




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Ecosystem Service	Gender	Age	Income	Education	Type of house	Work with nature
Shade			Less more affluent			
Clean Air	Shared highly important					
Carbon	Shared important					
Fruit provision		Higher 36-45			More house	
Honey provision		Higher >25	More high income			
Aesthetics		Higher >56	Less high income			No importance
Cultural identity		Higher >25	More high income	More complete education		No importance
Childhood memories		Higher >36	More high income			
Attractive to birds	Shared low importance					
Attractive to insects		Higher >56				
Allergies	Shared important					
Litter	Shared important					





Key messages

- Confirmation of shared ecosystem services and disservices.
- Age group should be considered when planning for urban forests.
- Higher income population include cultural services in their valued services – already cover their other needs with higher greening?
- People working with nature do not give importance to cultural services.
- Security was not explored.
- Gender did not showed differences for importance for EESS





Takeaways for planning

- Place-based planning
- Community participation towards greening decisions
- Greening towards equity should consider the gradient of values and desires
- Greening gives an opportunity for creating links among different groups values
- Disservices should be considered when planning for future greening





Thank you

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Food and Agriculture
Organization of the
United Nations





CEUs

**Session 1.2: Barefoot in the Park: How
contact with nature can affect our health
and wellbeing**



PP-23-3556



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