JANUARY 2019

ENVIRONMENTAL JUSTICE

TOWARDS EQUITY IN PHILADELPHIA URBAN FORESTRY

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EXECUTIVE SUMMARY

This report summarizes principles of environmental justice to inform urban forestry practices Philadelphia. In particular, this report guides recommendations to improve the TreePhilly program as it moves toward expanding the Community Yard Tree Giveaway Grant from 2019 to 2021. The report synthesizes principles of environmental justice and recommendations from academia and community members to create a list of best practices in Philadelphia urban forestry. Next, it analyzes the past distribution and demographics of TreePhilly tree distribution and presents a geographic prioritization for future outreach. Important conclusions of the report include:

- Commit to community engagement over time by targeting outreach to environmental justice communities over many years, investing staff, time, and resources into empowering resident action.
- Prioritize communities who are inequitably distributed environmental assets such as tree canopy, especially low-income and communities of color.
- Center accessibility and autonomy. Translate materials, create visuals, and use plain language. Give residents decision-making power and compensate time and labor.

Recommendations from the report were implemented in the Fall 2018 Community Yard Tree Giveaway season. The report concludes with a summary of the season and analysis of the effectiveness of different equity recommendations. Finally, the report points to future interventions and gaps in urban forestry programming.

TREEPHILLY

TreePhilly is an urban forestry program of Philadelphia Parks and Recreation dedicated to helping Philadelphia residents plant and care for trees. Since 2011, TreePhilly has distributed over 22,000 trees for Philadelphia residents to plant on private property through our Yard Tree Giveaway Program. TreePhilly also partners with community groups across the city to distribute trees locally in through the Community Yard Tree Giveaway Grant. In addition to distributing yard trees, TreePhilly also engages residents through park tree plantings, inventories, and community meetings.

INTRODUCTION

In 2009, the City of Philadelphia released the first Greenworks Plan,[1] setting the goal to become the "greenest city in America." Within the plan there are goals set for Energy, Environment, Equity, Economy, and Engagement. In the Equity section, Target 11 calls for increasing urban tree canopy (UTC) in all neighborhoods to 30% by 2025. In 2011, Philadelphia Parks and Recreation invented the TreePhilly program as a public-private partnership to achieve this goal by helping Philadelphia residents to plant and care for trees. Over seven years, TreePhilly has distributed over 22,000 saplings across Philadelphia. Now, TreePhilly is in a period of transition as the current funding for the program wraps up and a new, expanded sponsorship begins for 2019-2021.

Looking forward, how can the TreePhilly program respond to research and commentary from the American environmental justice community to benefit Philadelphia residents?

WHY ENVIRONMENTAL JUSTICE?

Environmental justice and equity are gaining recognition in Philadelphia governance. Mayor Kenny,[2] District Attorney Larry Krasner,[3] and the Office of Sustainability[4] have all expressed commitments to environmental justice and equity. The forthcoming RFPs for the Urban Forestry and Urban Agriculture master plans include environmental justice and equity as guiding principles. The Greenworks 30% UTC goal has been cited as an environmental justice initiative because it includes the provision that all neighborhoods must reach 30% urban tree canopy, as opposed to an average across the city.[5]

Environmental justice as recognized in government policy is also increasing nationally. Researchers studying government sustainability plans in urban areas found that plans including environmental justice provisions have increased since the millennium.[6] At the same time, trends of not fulfilling commitments to environmental justice have been noticed at federal[7] and local levels[8] as well as in urban forestry.[9] A sincere and thorough study of environmental justice is required for TreePhilly staff, partners, and participants to make informed, effective changes in programming, and avoid the pitfalls of poor implementation and community alienation.

WHAT IS IN THIS REPORT?

The goal of this report is to guide changes to the TreePhilly program, in particular the Community Yard Tree Giveaway Grant, in order to implement principles of environmental justice. First, the report will look at urban forest and inequity in Philadelphia and other American cities. Then, it will make recommendations for implementing environmental justice. Next, it will analysis past TreePhilly participation, and present a geographic analysis to prioritize urban forest resources in the future. Finally, the report will review how equity was implemented in the Fall 2018 TreePhilly season. Sources for the report were gathered from environmental justice and urban forestry research, interviews with local advocates, and conversations with Philadelphia residents.

This report was written on and for land traditionally belonging to the Lenni-Lenape people represented by their descendants across North America including the Delaware Nation and Nanticoke Lenni-Lenape Tribal Nation.[10,11]

THREE FACETS OF ENVIRONMENTAL JUSTICE[12-20]

RECOGNITION JUSTICE[12, 17]

Recognition justice acknowledges that indigenous, lower-income and people of color communities have been excluded from environmental decision-making through discrimination, oppression, and disinvestment throughout American history.

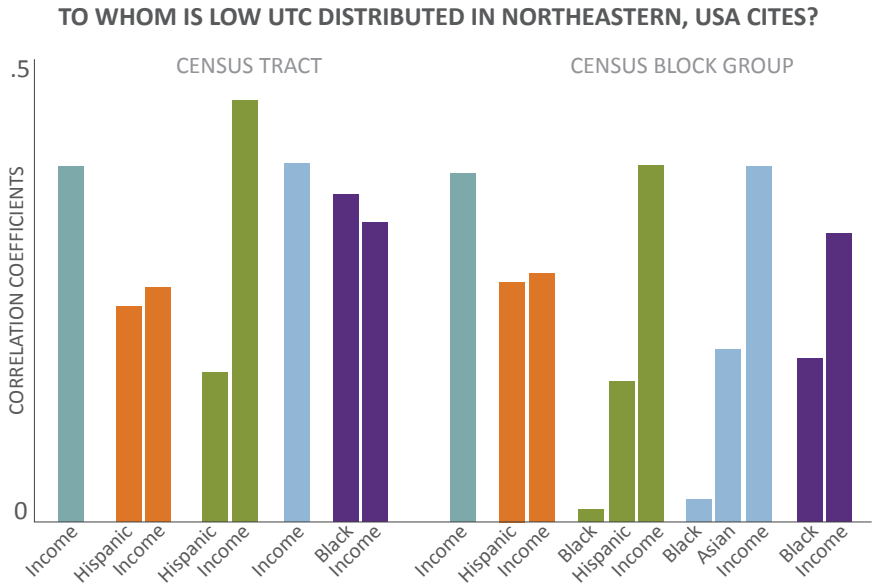
DISTRIBUTIVE JUSTICE[7]

Environmental harms and benefits are not equally distributed. Environmental justice communities are sentenced to living with hazards (toxic sites, industrial facilities, and waste dumps) and are not afforded assets (parks, polling places, hospitals)— or even normal conditions such as non-toxic schools and workplaces.

PROCEDURAL JUSTICE[16]

Procedural justice addresses the roots of injustice, calling for accessibility, meaningful engagement, and legitimate access to decision-making power. Procedural justice strives for a future where communities hold the power of self-determination for their environment.

INEQUITABLE UTC IN PHILADELPHIA



Research from Schwarz et al 2015[5] shows the strength of correlation between low UTC and income, race, and ethnicity in Northeastern US cities at both the census tract and block group.

What is Philadelphia's tree canopy compared to other Northeastern USA cities?

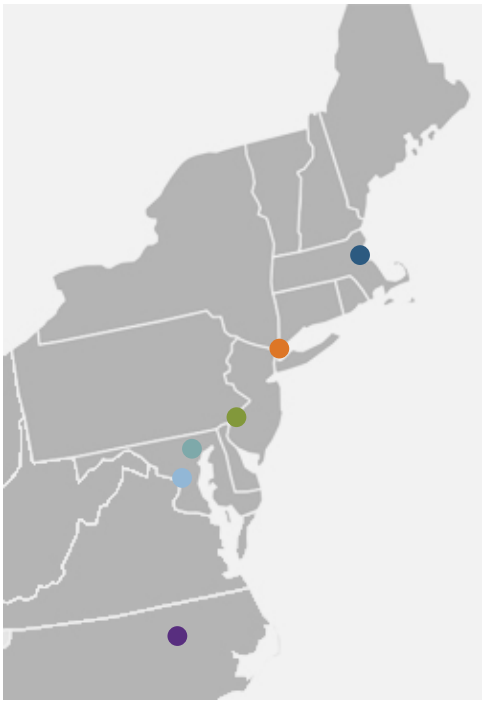
To contextualize the discussion of environmental justice in Philadelphia urban forestry, we must first understand Philadelphia's tree canopy and how it compares to other Northeastern United States cities in size and equitable distribution.

Estimates place Philadelphia's urban tree canopy anywhere from 12.5%[5] to 20%[21]. Compared to other East Coast cities, even 20% is a low number. The only city with lower urban tree canopy (UTC) is Jersey City at 11.5%.

Philadelphia also has a very inequitable tree canopy. At the census block group UTC is significantly negatively-related to black, Hispanic, and low-income communities; this means those communities have less UTC than they should. Furthermore, at both tract and block group levels, Philadelphia has the highest level of correlation related to income. This means that in Philadelphia, more so than other Northeastern cities, high-income and majority white neighborhoods are afforded UTC, and low-income, black, and Hispanic neighborhoods are not.

Other U.S. cities with income- and race-driven inequity include: Los Angeles, CA;[22] Sacramento, CA;[5] New Haven, CT;[23] Tampa, FL;[24] Indianapolis, IN;[25] Cincinnati, OH;[26] Boston, MA;[27] Raleigh, NC;[5] New York, NY;[5] and Milwaukee, WI.[28] Income, race, and ethnicity are high determinants of tree canopy across American cities. However, Philadelphia has both low UTC and high inequity. Administrators and environmental professionals should be very troubled at the intersection of our very low tree canopy and very high inequity in Philadelphia.

EAST COAST URBAN TREE CANOPY



- BOSTON, MA[27]
  29% UTC / 700,000 people
- NEW YORK, NY[5]
  16.35% UTC / 8.6 million people
- PHILADELPHIA, PA[5]
  12.65% UTC / 1.5 million people
- BALTIMORE, MD[5]
  22.34% UTC / 600,000 people
- WASHINGTON, D.C.[5]
  26.52% UTC / 700,000 people
- RALIEGH, NC[5]
  54.64% UTC / 500,000 people

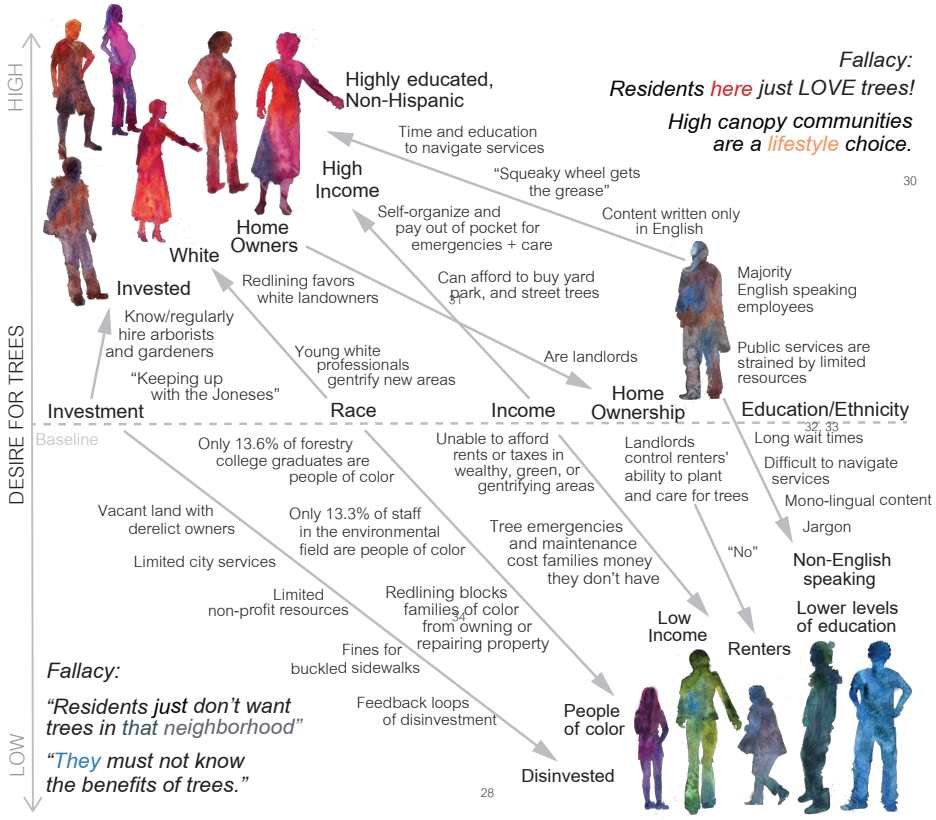
WHAT CAUSES INEQUITABLE URBAN TREE CANOPY?

Next, the underlying mechanisms of injustice will show how inequitable UTC is formed. Across American cites, UTC tends to be sorted according to income, race and ethnicity, housing tenure, and educational attainment. This is due to feedback loops of racist, classist, and colonial governance and culture in American history.[44] The diagram above shows an example of how race, income, and land ownership affect the "desire" for trees. Because the drivers of inequity are socially, not environmentally, formed efforts to plant trees frequently exacerbate inequity[35, 36, 37]

Over time, communities who are continuously kept from equitable participation in urban forestry, while watching more privileged communities continue to benefit from them, will begin to resist efforts to plant trees.[38,39,40] Their resistance is rational and based on the impacts of being treated inequitably for generations. Six factors drives community resistance (*page 4*).

UTC is not a neutral environmental feature; it is bound up in systemic disinvestment, racism, and classism. Equity in urban forestry is not a question of educating residents about the benefits of planting trees as objects in the landscape; it is one of making resources, decision-making, and trust accessible in ways that empowers communities to live with self-determination. Environmental justice offers a framework for building community resilience after generations of inequity.

FEEDBACK LOOPS BETWEEN DRIVERS OF INEQUITY



Feedback loops between the multiple drivers are misinterpreted as lack of desire for trees, or a lack of education about tree benefits, instead of an acknowledgment of drivers of inequity or tree disservices.

DRIVERS OF INEQUITY IN ORDER OF IMPORTANCE FOR DETERMINING UTC

1 INCOME[5, 24, 31, 35]

UTC IS SORTED TO UPPER INCOME COMMUNITIES AND AWAY FROM LOWER-INCOME COMMUNITIES

2 RACE AND ETHNICITY[5, 24, 31, 35, 41]

UTC IS SORTED TO WHITE COMMUNITIES AND AWAY FROM BLACK AND HISPANIC COMMUNITIES

3 HOUSING TENURE[24, 40, 42]

UTC IS SORTED TO HOME-OWNING COMMUNITIES AND AWAY FROM COMMUNITIES WITH HIGH NUMBER OF RENTERS

4 EDUCATION[36]

UTC IS SORTED TO HIGHLY-EDUCATED AREAS AND AWAY FROM COMMUNITIES WITH LOWER EDUCATIONAL ATTAINMENT

INTERSECTIONALITY

THOSE **MOST** AFFECTED BY UTC INEQUITY ARE AT THE INTERSECTION OF **ALL** THE DRIVERS: LOW-INCOME, BLACK AND HISPANIC RENTERS WITH LOWER LEVELS OF EDUCATIONAL ATTAINMENT.

DRIVERS OF RESISTANCE

Drivers of resistance are the reasons communities sometimes resist tree planting. They are the lived experiences, needs, and desires of communities. The drivers of resistance can be impacted by other conditions in the landscape. For example, climate change will worsen the severity of the drivers of resistance, while community cycles of investment or disinvestment can improve or worsen them.[5,22,28]

AESTHETICS[28,40]

Vacant-lot trees, fence-line trees, and poorly-maintained yard, park, or city trees which look messy or ugly prejudice people against new trees. People want more beautiful neighborhoods, but poorly-cared for trees make that difficult and sometimes unobtainable.

- Spontaneous, vacant-lot or fence-line trees
- Poorly-maintained trees on other properties
- Trees attracting rats, bird droppings, or other animals

MAINTENANCE[38,40,41]

Trees, especially large trees, require care over decades (or centuries!) and can cost individual residents thousands of dollars in maintenance. Residents frequently do not want trees because they know they cannot or are not willing to maintain them. Barriers to maintenance include:

- Lack of physical ability to do maintenance
- Lack of access to maintenance resources (arborists, tools)
- Lack of financial capacity to afford maintenance

SAFETY[28, 40]

Trees can inflict physical harm on people, property, and communities. Unmaintained, spontaneous, or poorly-planted trees rip up sidewalks, damage foundations, and drop branches on roofs. They damage public infrastructure and cause fear of personal injury.

- Accessibility issues caused by uneven sidewalks
- Physical damage to property or persons (pipes or injury)
- Allergies or health impacts.

FEAR[33,40,43]

Even if tress are not physically harmful, trees can exacerbate other harmful systems which impact communities economically, psychologically, and legally–and can even lead to safety issues. The fear of these impacts can discourage residents from wanting tress.

- Fear of Gentrification
- Fear of Crime
- Legal Consequences

DISTRUST[33,38,40]

Distrust is disillusionment with public or non-profit services. It is the result of decades of disinvestment and prejudicial governance in low-income and communities of color. Communities remember that they have been ignored or misused. This history of exclusion means the foundation of trust in public projects is (rightfully) shaky.

- Public inability or unwillingness to maintain city trees
- Long wait times, inaccessible or confusing services

OPPORTUNITY[27]

Even if residents want trees, they might not accept trees because they simply do not have the opportunity to plant them, or have such small yards that a tree would take up their entire property. Often low-UTC communities lack opportunity to plant trees **even if they wanted them** because of impermeable surface and incompatible land uses (industry, transportation, and utilities). This re-asserts the intersectionality of environmental justice where communities suffer from multiple issues simultaneously (*See pg 1, "Distributive Justice"*).

DRIVERS OF RESISTANCE IN PHILADELPHIA

In conversation with residents, local environmental justice advocates, fellow City staff as well as through academic sources the author found ALL of the drivers of resistance in urban forestry are present in Philadelphia. In order to make strides in environmental justice in urban forestry, TreePhilly must address resistance, engaging the real, lived and impactful experiences of residents affected by inequity.

AESTHETICS[45,46]

While aesthetics can drive resistance, in conversation with Ciara Williams and in scholarship, aesthetics were cited as the number one reason residents can be motivated to want trees. Residents across the city, cite trees and beautiful blocks as sources of pride. People want:

- Flowering trees
- Evergreen Trees
- Small, ornamental trees

MAINTENANCE[45,47,48,49,50]

In Hunting Park, community organizer José Ferran asked TreePhilly: you give people free trees, but do you help them maintain them? While the trees are free, we ask residents to shift the financial burden of the urban forest care on to themselves. Maintenance concerns include:

- End of life removal
- Conflict with pipes and wires
- Repairing sidewalks around street trees

SAFETY[33]

The largest safety issue around trees in Philadelphia is roots causing uneven sidewalks. There is very little recourse for property owners or residents to address sidewalk safety, beyond paying for maintenance out of pocket. Property owners can also be fined for uneven sidewalks, causing a negative feedback loop where residents can't afford to fix sidewalks and are punished for not affording it. Other safety concerns include: trees falling on houses or in roads or trees harming pipes and wires, and trees.

FEAR[33, 51]

Residents cite lived experiences of fear and victimization (including murder and drug crime) in parks and vacant lots across the city as reasons for resisting tree planting. In 2008, Penn academics showed tree planting in Philadelphia has the ability to significantly increase real-estate value of neighborhoods; in this way, tree planting is also a gentrifying agent. Crime and gentrification are powerful motivators for resistance to trees. They are also physical safety issues as people are harmed, lose their lives, or their families face housing insecurity.

DISTRUST[33,46,50,51]

In 1972, Mayor Frank Rizzo dismantled the Fairmount Park Guard, destroying trust and safety in parks across the city. In 1974, he cut the Parks budget by 50%. Since then, stewardship of public resources has lapsed. Employees and funds are stretched thin. Lower-income communities face the consequences; they cannot afford to subsidize park and street tree maintenance when the city can't do it. Community members are not inactive bystanders, they remember when it was better and that they have been ignored for decades.

OPPORTUNITY[45,47]

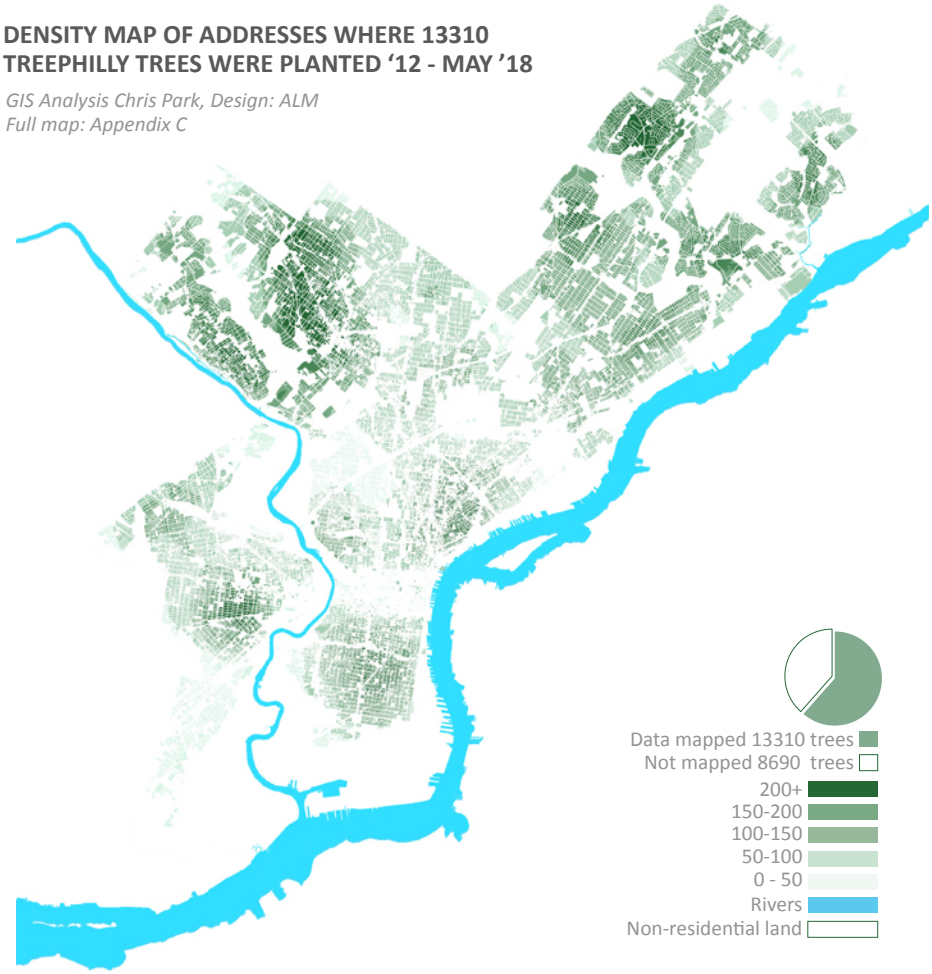
Current canopy in Philadelphia ranges from 2.5% (Chinatown) to 47% coverage (Chestnut Hill). But not every neighborhood has the capacity to increase their tree canopy equally; opportunity to increase canopy in Philadelphia ranges from 30.5% UTC to 97.80% UTC. It will be much harder to reach our 30% goal in areas that will require every single patch of impermeable land to be planted with a tree, versus a neighborhood that can accommodate other land uses. Not every property owner will be excited to plant yard trees on their small parcels.

TREEPHILLY PAST PARTICIPATION

Considering Philly's low tree canopy, high inequity, and the drivers of resistance, clearly, urban forestry could benefit from an environmental justice. But, before applying the that lens, we must understand TreePhilly's past contribution to urban forest equity or inequity. A study of the density of TreePhilly shows the majority of trees have gone to the Northwest and Northwest. While a demographic comparison shows TreePhilly users are white, upper income, and highly-educated.

DENSITY MAP OF ADDRESSES WHERE 13310 TREEPHILLY TREES WERE PLANTED '12 - MAY '18

GIS Analysis Chris Park, Design: ALM
Full map: Appendix C



HIGHEST TEN ZIP CODES 51% of Trees

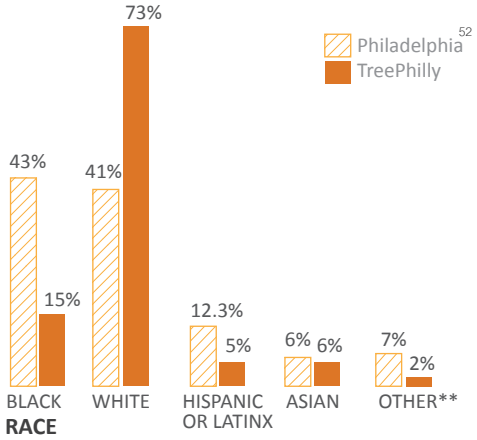
1.	19128 Roxborough	1024
2.	19115 Bustleton	879
3.	19111 Burleholme	836
4.	19119 Mt. Airy	729
5.	19116 Somerton	643
6.	19144 Germantown	640
7.	19114 Torresdale	605
8.	19154 Poquessing	581
9.	19143 Kingsessing/Cedar Park	479
10.	19124 Frankford	432

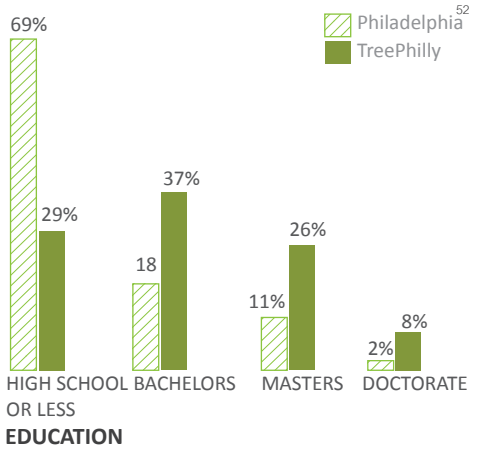
LOWEST 10 ZIP CODES 4.5% of Trees

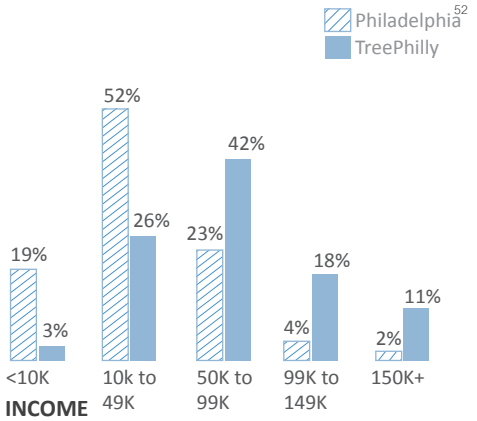
1.	19112: Navy Yard	1
2.	19107 Chinatown	16
3.	19102 Center City West	22
4.	19106, 19103	40
5.	Outside Philadelphia County	56
6.	19132: Strawberry Mansion	68
7.	19142: Elmwood	74
8.	19141 Logan/Ogontz	87
9.	19153 Eastwick	101
10.	19127 Manayunk	102

PAST PARTICIPANT DEMOGRAPHICS*

TreePhilly gathered past participant demographics by emailing citywide giveaway participants with a link to a survey in English. Surveys were distributed from Spring 2014 to Spring 2018. This chart reflects around 2600 responses. Based on language, communication medium, and access to email, these results are heavily self-selecting. Surveys did not consistently collect responses on two or more races, indigenous, pacific islander of Hawaiian, or other races.





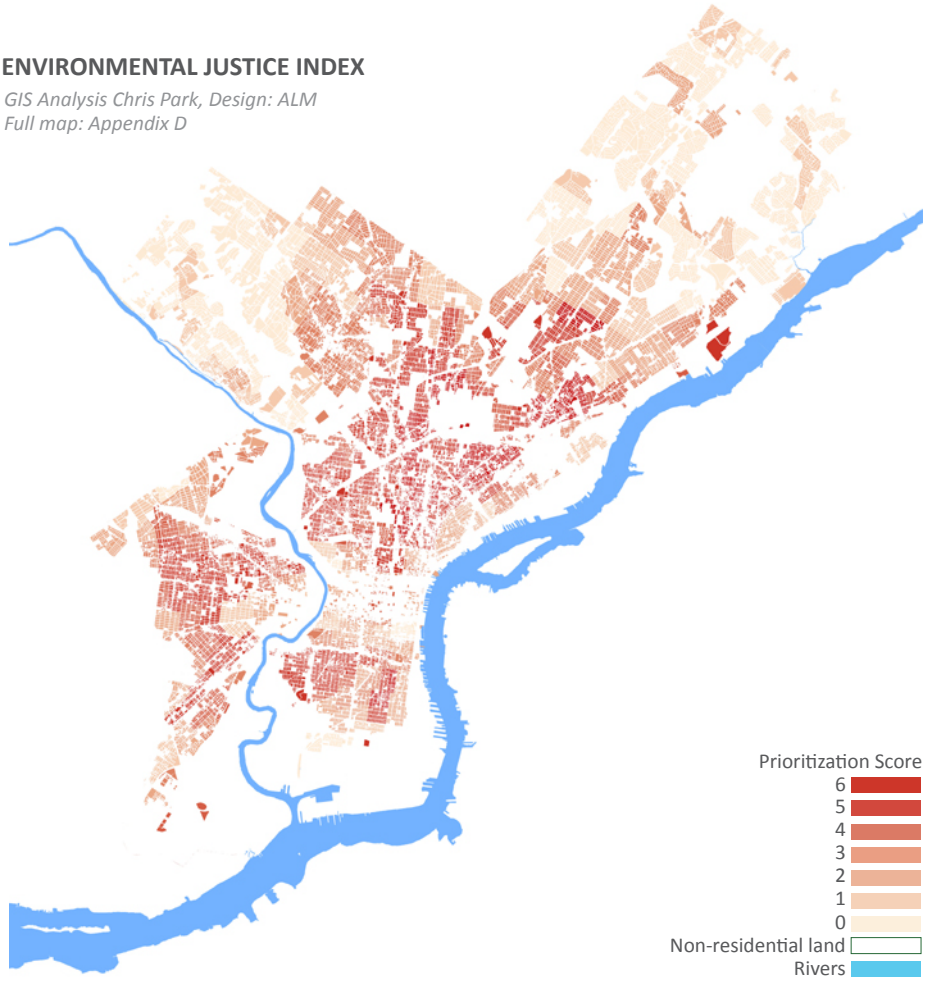


ENVIRONMENTAL JUSTICE INDEX

To remedy geographic blindspots of past TreePhilly distribution, an geographic analysis of Philadelphia was completed with the principle of environmental justice in mind. The Index shows clusters of priority areas: central West Philly, South Philly, and almost all of North Philadelphia. In the Northeast, only Frankford and Oxford Circle scored a 5 or 6 on the index.

ENVIRONMENTAL JUSTICE INDEX

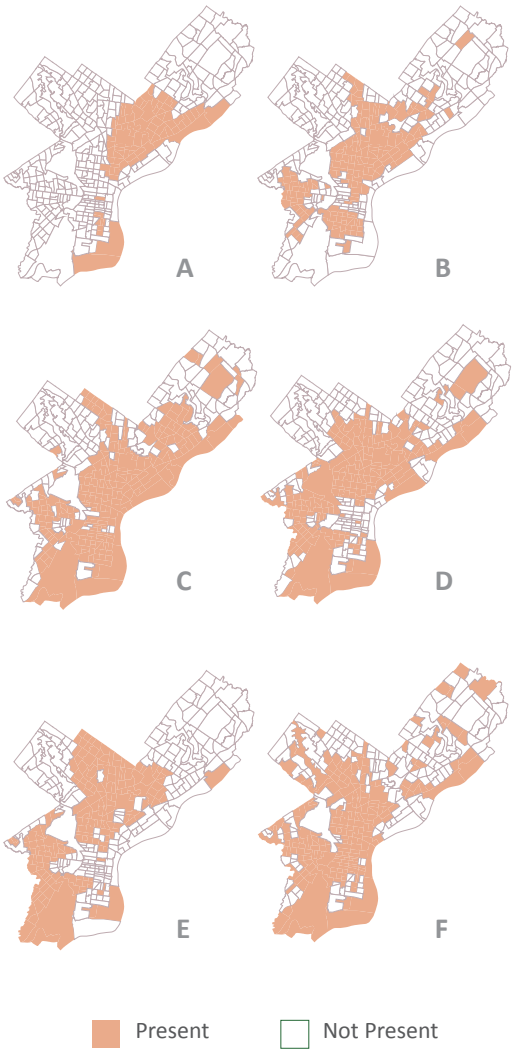
GIS Analysis Chris Park, Design: ALM
Full map: Appendix D



METHODOLOGY

The Environmental Justice Index was created with a McHargian suitability analysis[53] where geospatial data are scored and stacked to create a layered map of priority areas in the landscape. Data was organized by census tract and assigned a 1 for areas with drivers of inequity present and 0 for areas without each driver present. Education was not mapped. Scores were assigned based on the above or below average data for Philadelphia County calculated from each dataset. The final map shows the hierarchy of scores from highest (6) to lowest (0) environmental justice need. The map only shows residential land use, with all other land use appearing as white.

PRIORITIZATION LAYERS



- **A** **Hispanic/Latinx population > 12.3%**
- **B** **Above average summer heat**[54]
- **C** **Tree Canopy: UTC < 15%**
- **D** **Household Income per year >$35.251**
- **E** **Non-white population >35.8% white**
- **F** **Dwellings occupied by renters > 47.8%**

RECOGNITION JUSTICE

ACKNOWLEDGE

Recognize: City practices over decades have disinvested unevenly from communities, leaving low-income and people of color communities without robust city services, especially in urban forestry[40,55]

Listen: Recognize resistance to tree planting as rational and legitimate decision-making informed by local histories and conditions.[38,39]

Commit: Show long-term and sustained support over years, not only season-to-season.[46]

Allocate: Designate internal resources for addressing environmental justice. Make time to visit neighborhoods, attend community events, listen to resident concerns, and help with issues not necessarily related to trees (ex. connect residents with Parks & Rec staff who can help them addressing dumping in the local park).

Be Accountable: Hold the program accountable to local goals. Act with transparency. Communicate clearly and respond to input.

DISTRIBUTIVE JUSTICE

WHO

Low-income residents, renter communities, Hispanic and communities of color, and communities with lower levels of educational attainment.

WHERE

Health: Prioritize communities suffering from heat inequity: North, South, and West Philly.[35]

Lowest Tree Resources: Prioritize areas that do not already heavily use our program or other urban forestry resources.[35,36,37]

Network: Leverage community distribution sites: schools, faith centers, institutions, rec centers, libraries and more.[58]

WHAT

Awareness: Distribute knowledge about our program beyond social media and email.

Maintenance and care information: Lower barriers to community maintenance by distributing clear, accessible maintenance content.[56]

Toolkit: Distribute greening toolkit to allow residents to "opt-out" but still end up with resources to make their community more sustainable.[38,45,56]

Climate Change: Help communities adapt to climate impacts in the urban forest.[5,22]

PROCEDURAL JUSTICE

SELF DETERMINATION

Local Planning: Set neighborhood-level forestry goals based on community input.[40, 56]

Decision-making: Allow long-term partners to have meaningful input on decisions.[40, 56]

Compensation: Financially compensate partners for their time and labor.

ACCESSIBILITY

New Messages: Engage a diversity of reasons people want trees.[37]

Face-to-face: Go to where people are, connect with communities face-to-face as opposed to through social media or email.[60]

Plain language: Aim for a 6th grade reading level or below. Eliminate jargon and puns.[58]

Language Access: Create multi-lingual content and documents translatable by ViOP or translation applications.[59]

Visual Representation: Use to-scale graphics to communicate how trees look and grow over time.[60]

Lower Barriers: Give communities in priority areas first choice of dates for planning a Community Yard Tree Giveaway event.

URBAN FORESTRY TOOLKIT

TreePhilly can't offer residents everything they need to build sustainable and self-determining communities. While the program grows more equitable, TreePhilly can continue to provide our resources while connecting residents with other tools to build local urban forestry equity.

STREET TREES

- THE STREET TREE MANAGEMENT DIVISION A Parks and Recreation Office, the Street Tree Management Division offers free planting, care , and removal of street trees to property owners. They also vet certified arborists and approved contractors, and award permits for street tree work.
- PENNSYLVANIA HORTICULTURAL SOCIETY (PHS) TREE TENDERS: Tree tenders organizes neighbors to plant free street trees twice a year. Tree tenders also offer low-cost classes to learn about urban trees.

PARK TREES

- PARK TREE INVENTORY PROJECT: the inventory program helps local communities make urban forestry decisions for their local parks.
- LOVE YOUR PARK (LYP): Love Your Park organizes local stewardship for parks, providing free trees, mulch, and tools to residents.
- TD TREE DAYS: TD Tree Days offers a grant for parks in low-income areas to buy larger tree stock.

LANDSCAPING

- PHILADELPHIA WATER AND PHS RAINCHECK: Raincheck offers support for private property owners to change their property to allow for stormwater infiltration. This includes support for removing impervious surface.
- P3: The P3 Program grows and maintains native plant gardens on Parks and Recreation property to beautify neighborhoods and show residents what they can do on their own property.

EMERGENCIES

- READYHOME: A program of the Office of Emergency management, READYhome helps residents prepare their homes for many types of emergencies.
- READY COMMUNITY: In READYCommunity, OEM spends one year working closely with residents to map assets and needs so that they be able to respond to the local emergencies.
- PECO: PECO helps residents address tree emergencies around public power lines

BEAUTIFYING

- RECYCLING BINS: The Streets Department offers free recycling bins at distribution points across the city.
- COMMUNITY LIFE IMPROVEMENT PROGRAM (CLIP): CLIP helps clean up vacant lots and lends supplies to residents for block clean ups.
- KEEP PHILADELPHIA BEAUTIFUL: KPB offers education and resources for communities to keep their neighborhoods beautiful!

- TreePhilly Program
- TreePhilly Partner Program
- Parks and Recreation Program
- City of Philadelphia Program
- Outside Organization

*** This is not an exhaustive list of partnerships and possible connections. Connections within the Philadelphia environmental sustainability and social justice communities are limitless!

WHAT CAN TREEPHILLY OFFER?

1 FREE YARD TREES

We will continue to be a robust source of free yard trees through our Community Yard Tree Giveaway Grant program.

2 EXPERTISE

As horticultural experts we can give residents fact sheets and info on care and maintenance. We can also provide consultations for tree questions.

3 CONNECTION

We can be a hub of connecting city resources to communities and vice versa: even if we can't solve a problem we can introduce residents to someone who can.

4 SUPPORT

We have time, resources, and staff to devote to helping partners and residents overcome barriers in urban forestry.

5 ORGANIC MATERIALS

The Fairmount Recycling Center remains a free source of organic materials and is something we can consistently offer to communities.

6 MONEY

We are able to offer partners compensation for time, resources, and event expenses through the Community Yard Tree Giveaway Grant.

ENVIRONMENTAL JUSTICE IMPLEMENTATION FALL 2018

In Fall 2018, we made several changes to the Community Yard Tree Giveaway Grant program to implement the principles of environmental justice.

BEAT THE HEAT

TreePhilly worked with the Office of Sustainability to addressing heat inequity in Hunting Park through resident-supported solutions. TreePhilly visited the neighborhood regularly, designed two neighborhood maps, and helped facilitate a community design session. We distributed 71 trees to 19140, more than ever before! In fall 2018, Hunting Park was the 2nd zip code with the most trees, passing neighborhoods that have long absorbed most of our trees (*page 6*). This brings Hunting Park to our 14th most served zip code with 370 trees. This was all because of community partner Gabriella Paez who hosted two giveaways in 19140! We look forward to growing that number over the coming seasons.

THE FOOD TRUST

Every Wednesday in October, TreePhilly partnered with the Food Trust Farmer's Market at 58th and Kingsessing to distribute free trees to market visitors, with the hope to meet residents where they are, instead of waiting for them to come to us. We distributed 35 trees over five weeks. We distributed 64% of trees to West Philly, and 8 trees to 19142 (Elmwood), one of our least served zip codes of all time. We look forward to continuing to work with the 58th and Kingsessing Farmer's Market.

CHANGES TO COMMUNITY YARD TREE GIVEAWAY GRANT PROGRAM MADE IN FALL 2018

1 COMMUNITY-BASED DISTRIBUTION

This Fall, we transitioned from partially citywide distribution to completely community-based distribution. We also allowed partners to close their events to local zip codes, chosen by them, until a week before the event.

2 NEW PARTNERS

We expanded our contact network to distribute the Community Yard Tree Giveaway Grant. We awarded the grant to three new partners.

3 NEW PROFILES

This season our tree species profiles were redesigned to show species growth over time and maintenance. Profiles also show where trees can be planted near wires, pipes, or patio. The profiles were written about in a *New York Times* article "Free Trees? Residents of Detroit Say No Thanks."

4 TRANSLATION

Our Yard Tree Planting and Care Guide was translated to Spanish in Spring 18, but this season we translated our species profiles to Spanish as well.

5 NEW PARTNERSHIPS

We partnered with the Office of Sustainability on the inaugural Beat the Heat initiative. We also kicked off a partnership with the Food Trust Farmer's Market at the 58th and Kingsessing Farmer's Market every Wednesday in October. In Spring 2019, we look forward to working with OEM ReadyCommunity in East Tioga and potentially Eastwick.

FALL 2018 DISTRIBUTION RESULTS

Alterations increased the number of trees to North, Southwest, and West Philadelphia while minimizing the number of trees to the Northeast and Northwest. Only distribution to South Philadelphia remained the same as almost every other season.

WEST AND SOUTHWEST

Having three events in West Philadelphia as well as offering trees at the Food Trust farmers market in 19143 brought West Philadelphia distribution up to 14% from 9% all time and the lower Southwest (19142, and 19153) to 3% from 1%. In fact, 17% of all the trees we have ever distrusted to the Lower Southwest were given away in the fall 2018 season. This suggests we should keep moving forward with an environmental justice lens to increase our reach in the lower Southwest.

NORTHEAST AND NORTHWEST

We minimized the number of trees going to our most-served neighborhoods of all time in fall 2018. In particular, residents from 19128, 19116, 19154, 19115, and 19114 still picked up trees from almost all of our events. An environmental justice lens increases our reach across they city without compromising continue to serve many areas. At the same time, not every zip code or block within these neighborhood classifications was served equally. In the Northeast, 19149 and 19135 received less than ten trees. In the Northwest, 19150 received zero trees.

NORTH

We gave away 25% of all trees to North Philadelphia in Fall 2018! Because North Philly is the largest concentration of priority areas, this is a huge accomplishment! We held three giveaways in North Philly, two of which were hosted by Gabriella Paez in 19140!

TRADEOFFS

Community-based distribution served communities near the event very well but not every zip code in the city. In the future, events should be rotated around zip codes to target our priority communities, but also to spread out distribution to more zip codes, of particular interest are 19141 (Logon Ogontz), 19132 (Strawberry Mansion), and 19149 (Mayfair), because they are high priority but were not distributed many trees in fall 2018.

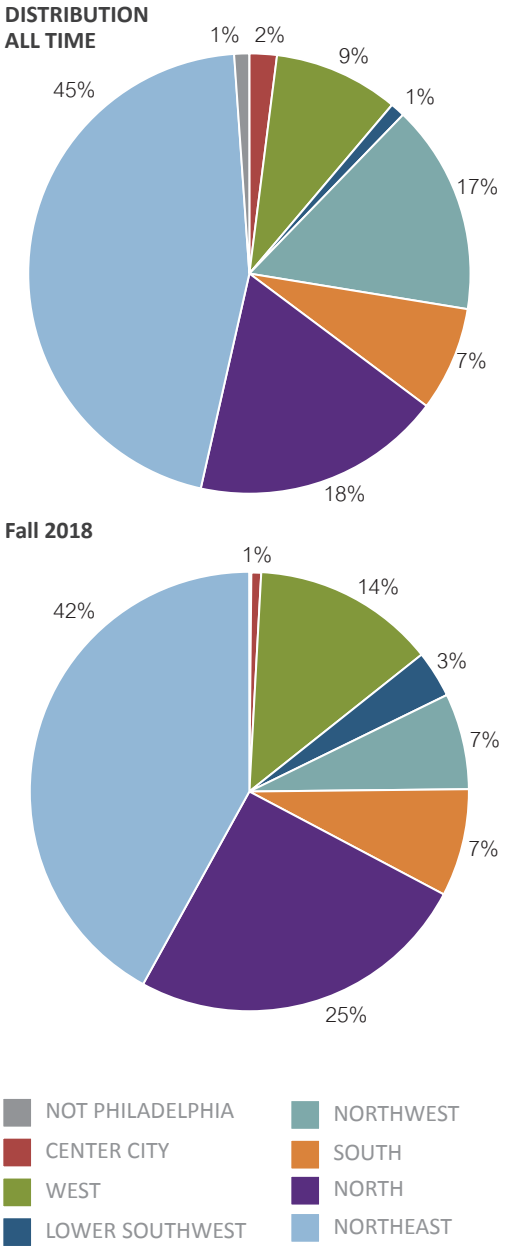
HIGHEST TEN ZIP CODES 57% of Trees

1.	19116 Somerton	74
2.	19140 Hunting Park	71
3.	19154 Poquessing	67
4.	19143 Kingsessing	49
5.	19115 Bustleton	45
6.	19122 North Philly East	31
7.	19131 Wynnefield	27
8.	19128 Roxborough	25
9.	19114 Torresdale	22
10.	19124 Frankford	19

LOWEST 10 ZIP CODES 13% of Trees

1.	19130, 19107, 19126, 19150	0
2.	19103, 19127, 19138	1
3.	19132, 19141	2
4.	19135, 19103	3
5.	19129, 19152	4
6.	19118: Chestnut Hill	5
7.	19123, 19125, 19149	7
8.	19136, 19139, 19153	8
9.	19146, 19147	9
10.	19121 Brewerytown	10

OF TREES IN EACH NEIGHBORHOOD

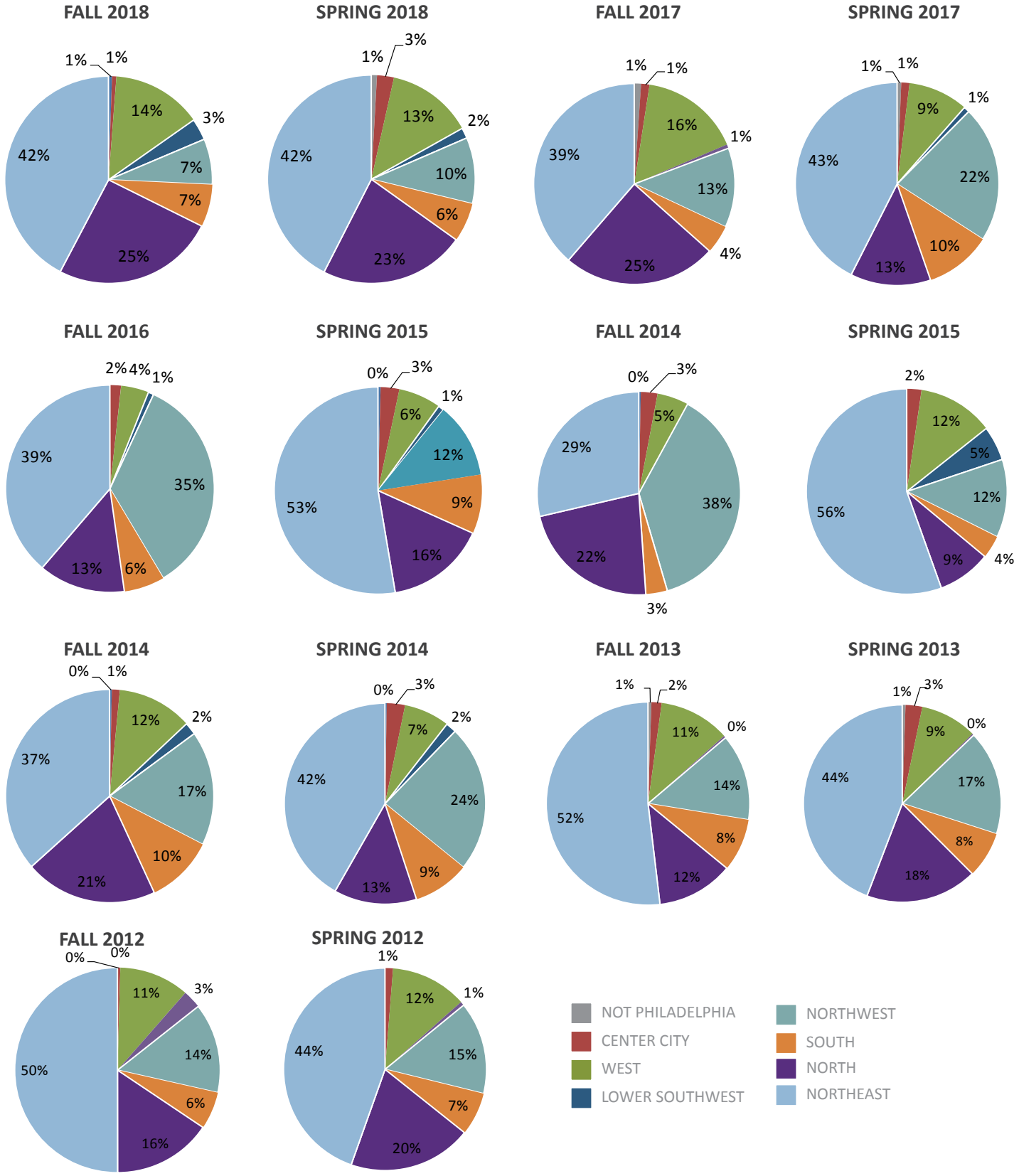


TO SEE HOW ZIP CODES WERE CLASSIFIED SEE APPENDIX A

FOR RAW DATA SEE APPENDIX A

APPENDIX A

Zip Code	Place		Score	All Time	F18	S18	F17	S17	F16	S16	F15	S15	F14	S14	F13	S13	F12	F12	Average
19102	Center City West	CC	2	22					2	2				10	3	5			4.4
19103	Rittenhouse Square	CC	3	40	2	1	4	1	2	5	5			3	1	7	2	5	3.17
19104	Mantua + U City	W	3-6	231	9	8	17	14	4	15	6	25	27	19	14	39	15	18	16.4
19106	Center City East	CC	1	40	3	5	2				2	4		5	1	16	1	1	4
19107	Chinatown	CC	3-5	16			2		2		1		4	2		4		1	2.29
19111	Burleholme	NE	2	836	17	45	40	63	22	94	7	100	64	93	52	110	66	63	59.7
19112	Navy Yard	S		1			1												1
19114	Torresdale	NE	1	605	22	50	30	44	17	55	1	49	28	33	20	99	73	84	43.2
19115	Bustleton	NE	1	879	53	25	40	57	34	68	24	69	56	137	55	104	100	57	62.8
19116	Somerton	NE	2	643	74	67	70	31	14	44	6	46	37	76	28	56	46	48	45.9
19118	Chestnut Hill	NW	0	275	5	7	4	21	22	9	37	23	10	37	14	38	11	37	19.6
19119	Mt. Airy	NE	3	729	17	40	36	61	40	23	88	46	38	72	38	93	59	78	52.1
19120	Olney	N	5	303	27	49	61	14	7	24	11	12	16	22	10	21	12	17	21.6
19121	Brewerytown	N	5	180	10	14	17	9	9	13	7	7	14	22	4	20	17	17	12.9
19122	N Philly East	N	6	162	31	14	18	8	10	3	14	3	11	11	2	15	13	11	11.7
19123	East Poplar	N	5	123	11	10	10	17	8	9	5	7	2	2	5	13	13	11	8.79
19124	Frankford	NE	6	437	19	29	30	26	17	41	9	31	22	22	19	59	56	57	31.2
19125	Kensington	N	3	404	6	14	35	30	8	28	34	20	35	28	14	89	21	42	28.9
19126	Oak Lane	N	3	173	0	6	28	1	6	8	6	2	6	21	8	23	17	41	12.4
19127	Manayunk	NW	1	102	2	9	1	22	8	10	9	10	10	9	2	7		3	7.85
19128	Roxborough	NW	1	1024	25	40	48	135	92	51	95	63	80	160	28	93	56	58	73.1
19129	East Falls	NW	2	210	4	10	15	8	23	9	48	4	13	28	3	18	11	16	15
19130	Fairmount	CC	2-3	151		18	7	13	6	22	9	19	7	21	4	15	1	9	11.6
19131	Wynnefield	W	3-4	338	27	27	68	24	2	9	8	28	32	16	13	29	13	22	22.7
19132	Strawberry Mansion	N	5	64	2	9	2	3	5	8	3	1	3	8	5	9	2	8	4.86
19133	Fairhill	N	6	150	11	17	34	13	2	5	10		17	8	2	7	11	13	11.5
19134	Port Richmond	N	4	284	21	29	26	27	17	35	22	9	19	12	5	28	17	26	20.9
19135	Tacony	NE	3	276	6	9	45	38	12	38	2	22	10	14	7	23	29	21	19.7
19136	Holmesburg	NE	3	432	13	43	40	28	21	34	9	28	19	43	19	63	35	38	30.9
19137	Bridesburg	NE	2	146	12	5	6	11	8	9	5	47	2	4	3	13	11	10	10.4
19138	West Oak Lane	N	3	151	2	4	10	6	6	3	18	11	16	17	4	20	15	19	10.8
19139	Haddington	W	5	177	7	18	24	15	4	9	6	9	11	11	6	16	17	24	12.6
19140	Hunting Park	N	6	370	66	37	31	6	11	18	12	10	35	33	8	50	29	24	26.4
19141	Logan Ogontz	N	6	87	1	5	2	4	5	2	2	1	10	3	1	20	10	20	6.14
19142	Elmwood	SW	4	74	18	2	4	4	2	2		29	12	10	1	2	10	3	7.62
19143	Kingsessing	W	5	479	49	52	59	40	18	25	7	39	25	51	19	26	35	44	34.9
19144	Germantown	NW	4	640	17	21	69	47	35	34	39	7	31	88	25	91	64	49	44.1
19145	West Passyunk	S	5	222	17	8	9	35	12	20	16	2	10	37	7	14	11	17	15.4
19146	Grays Ferry	S	5	230	9	23	12	28	7	20		17	16	23	10	30	15	20	17.7
19147	Queen Village	S	5	278	6	16	12	12	12	15	6	7	44	35	17	55	26	15	19.9
19148	Lower Moyamensing	S	5	292	17	9	17	39	13	37		9	24	33	13	31	15	35	22.5
19149	Mayfair	NE	5	291	11	14	19	26	59	18	8	20	11	30	11	23	14	25	20.6
19150	Stenton	NW	3	167		8	5	2	61	4	13	13	12	11	5	49	19	24	17.4
19151	Overbrook	W	3-4	252	12	18	11	10	2	8	5	17	9	6	11	50	45	46	17.9
19152	Rhawnhurst	NE	2	374	3	18	24	37	14	40	11	23	16	32	16	57	44	39	26.7
19153	Eastwick	SW	3	68	7	13	3	6	4	7		24	5	14	1	3	23	5	8.85
19154	Poquessing	NE	1	428	67	46	49	38	12	62	14	60	24	32	22	62	35	44	40.5
	Not Philly			57	4	8	12	7		4	2		3	4	3	9	1		5.18
	Total			13553	742	920	1109	1081	697	999	642	973	896	1408	559	1724	1136	1265	


FALL 2018
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SPRING 2018
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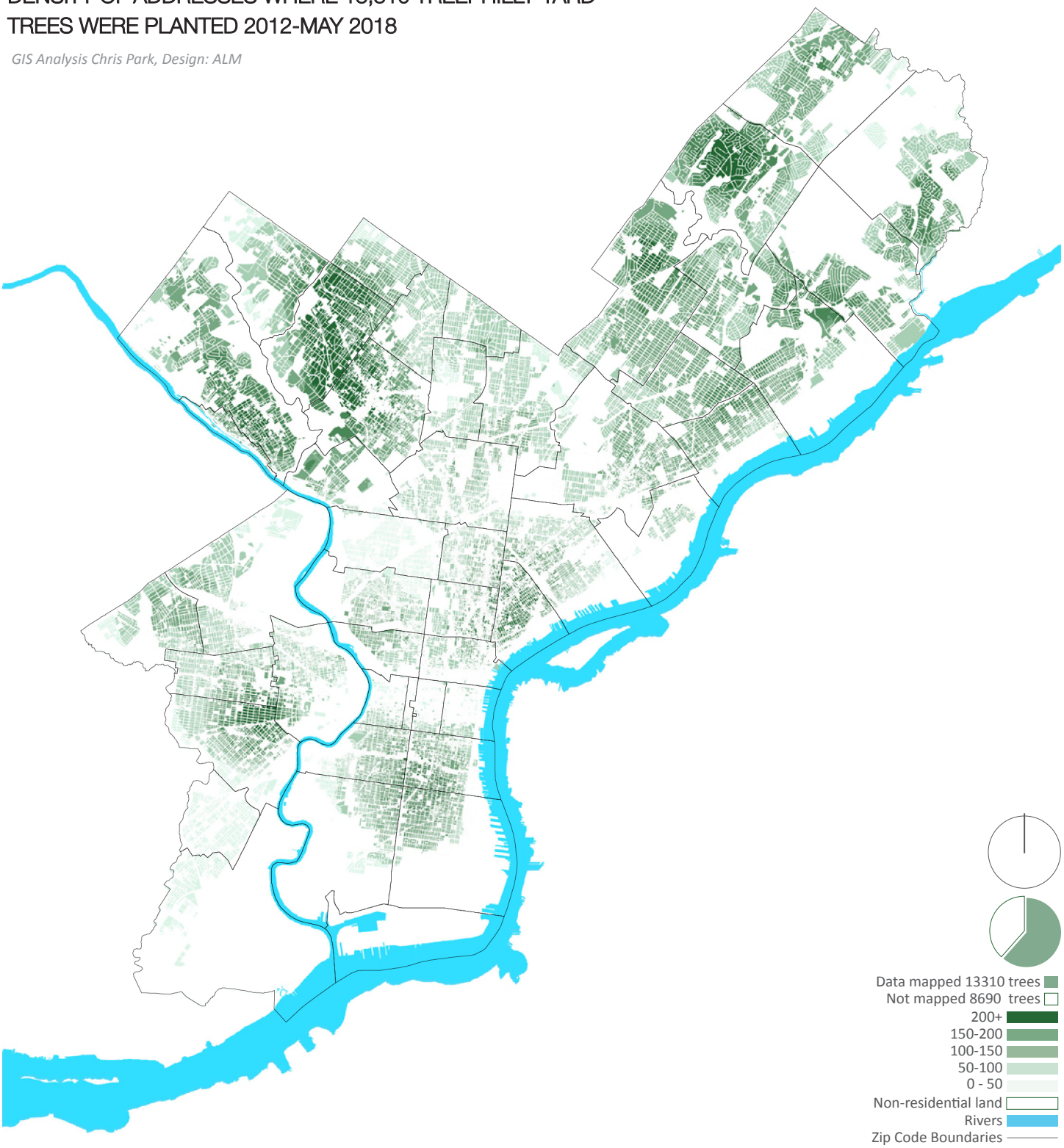
NOT PHILADELPHIA
CENTER CITY
WEST
LOWER SOUTHWEST
NORTHWEST
SOUTH
NORTH
NORTHEAST

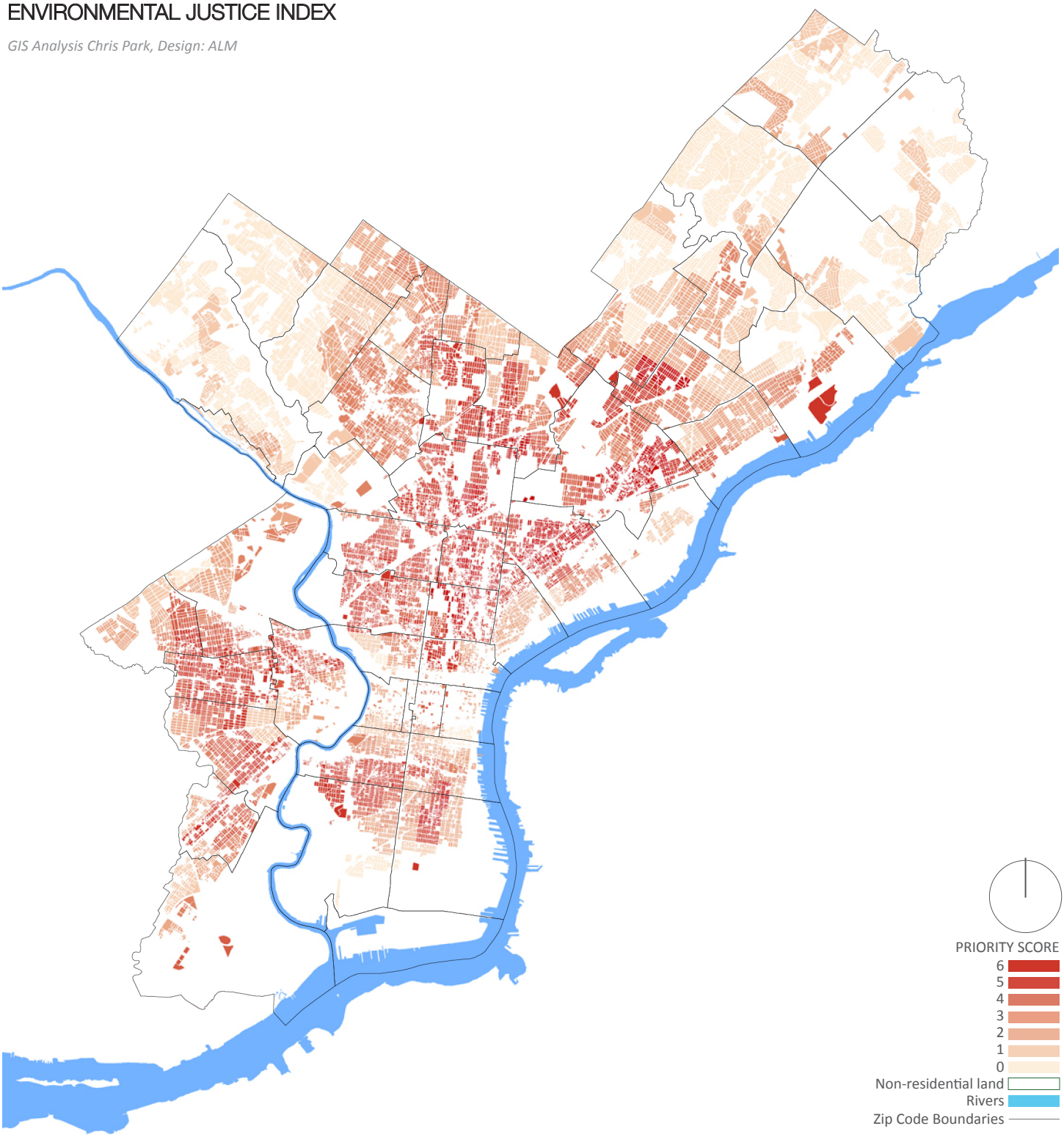
DENSITY OF ADDRESSES WHERE 13,310 TREEPHILLY YARD TREES WERE PLANTED 2012-MAY 2018

GIS Analysis Chris Park, Design: ALM



ENVIRONMENTAL JUSTICE INDEX

GIS Analysis Chris Park, Design: ALM



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