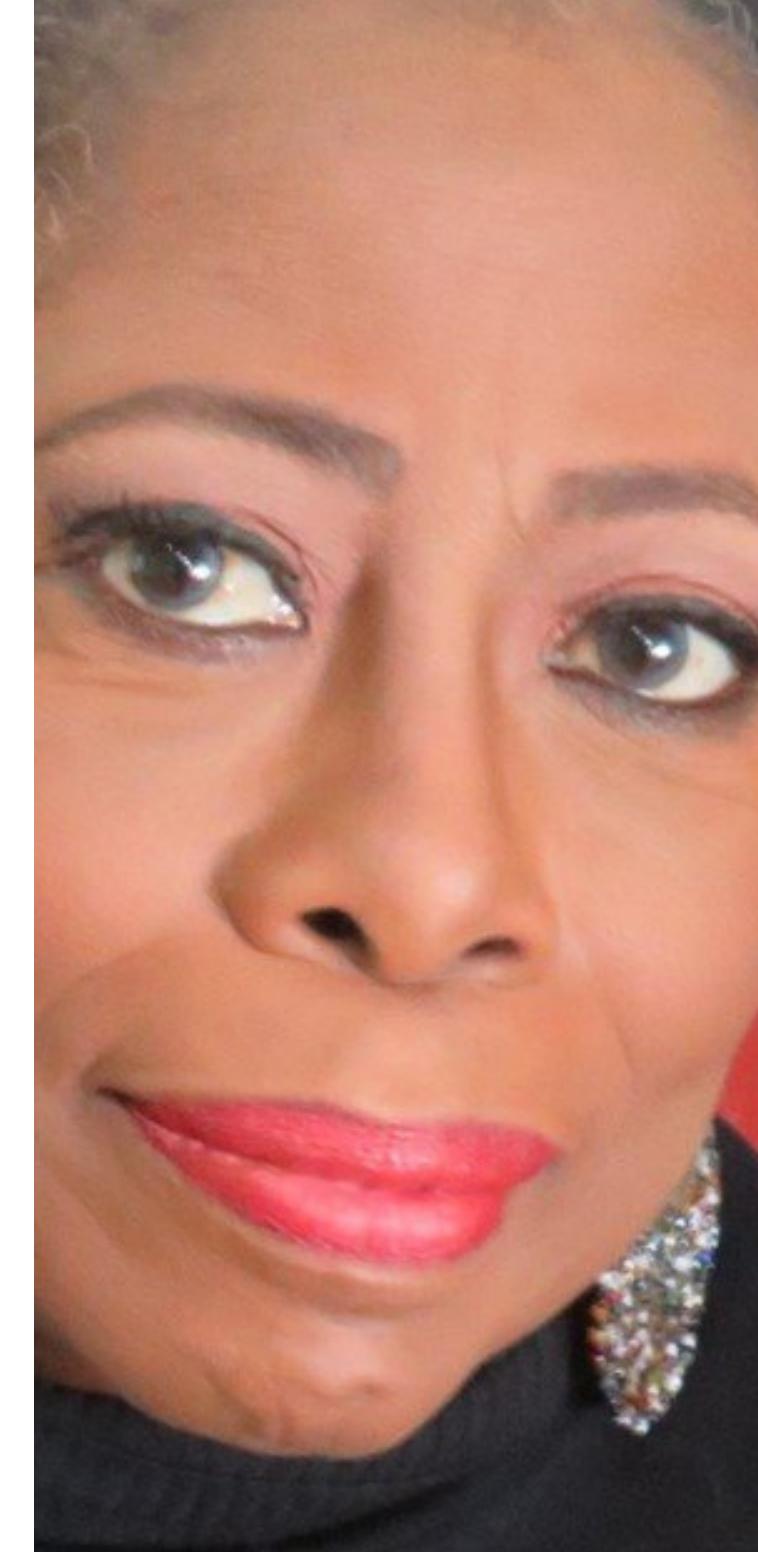




NORTH LAWNDALE EMPLOYMENT NETWORK

20
24

SUSTAINABILITY & CLEAN ENERGY JOBS WHITE PAPER



FORWARD

When I was giving birth to BIG! back in 2007, Van Jones was becoming America's Green Jobs Czar, Majora Carter was reinventing the Art of Sustainable Making, and Brenda Palms was holding court as the Empress of Second Chances. She still is. The North Lawndale Employment Network was a safehouse for justice on Chicago's West Side. America, outside of communities harmed, was largely ignoring its environmental crimes. Today both have captured America's imagination – NLEN's work is abuzz coast-to-coast and environmental justice is a full-on movement.

But we know not all movers in the movement are true, and whitewashing community triumph – as with our civil rights movement – surely kills. Thus, we're cautioned now as we navigate the complexities of climate action, to hold the center and the frontline of our cause with the voices and experiences and demands of our most affected. Because the progress we make together with our crosstown allies can only be sustained when affected communities lead the way...and when governments champion both climate equity – balancing environmental burdens and benefits – and climate justice – righting the wrongs to marginalized communities, then and now.

In this white paper, author Dr. Elisha Hall shares blueprints for achieving and sustaining equity and justice. I call it Triumph – the convergence of courage, creativity, genius, ethics, and love as modeled by our Great Migration ancestors. With love, I remember Dr. Hall more than a decade ago as a young father, a man finding his way in our urban wilderness, a solution seeking the best problem to solve. I knew him as a balm and a fire in a time and place of awaking daily to the quiet trauma of losing the movement. Twelve years of Reconstruction and 12 years of Civil Rights had recoiled in ways horrific to our Black American health and wealth. Still, the same DNA that brought us through Civil War and Civil Rights is with us now, and we can find sweetness in our daily lives and our movement to triumph in the stories that Dr. Hall shares here.

Thinking about Dr. Hall and NLEN makes me happy, and with all our strength in Black excellence, I've come to view our Black joy energy as our superpower. There is happiness in our journey to sustainability & clean energy jobs. There is wisdom in the sweetness.

The North Lawndale Employment Network's Sweet Beginnings initiative is a power that has stood the test of time. Launched in 2004, their trailblazing work in urban beekeeping and honey production not only provided employment as a 'second chance' for folks with so-called 'justice involved' backgrounds, but also nurtured their profound appreciation for a source of life, our God-given ecosystems. With clean energy jobs, we have the opportunity not only to combat climate change but also to create meaningful career pathways for marginalized communities. With 757 workers employed to date, the influence of initiatives like Sweet Beginnings cannot be overstated. The mushrooming harms of climate change imperil the very existence of honeybees—an indispensable link in our food ecosystem.

There is power in sweetness. With NLEN's Sweet Beginnings workforce development shining out from the center, Dr. Hall sheds light on the intersectional issues of environmental racism and economic opportunity – most meaningful when viewed together. His examination of historical context and regional analysis connects the challenges we face to our most promising pathways forward. These connections are essential to climate justice.

Too many Americans are a mix of unaware and afraid – forces that led to the unraveling of Civil War and Civil Rights gains. For its legacy, for this paper, for the workers and the customers (which are both bees and people), North Lawndale Employment Network is commended for its commitment to solving for both.

May this paper serve policymakers, advocates, and neighbors as we work together to rebuild what we have destroyed. At our core we are a species that loves justice. At its core, North Lawndale Employment Network demonstrates the happiness, power, and love in the sweetness.

From my Heart,
NAOMI DAVIS
Blacks in Green
Founder/CEO



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Introduction

The time is now for equity in conservation, environmental stewardship, and renewable energy. These green jobs can help to restore and repair harm and trauma in BIPOC communities across the nation. Especially in North Lawndale, located in Chicago, IL.

North Lawndale Employment Network (NLEN) is a place-based, nonprofit workforce development organization whose mission is to increase the earnings potential of the North Lawndale community of Chicago through innovative employment initiatives that lead to economic advancement and an improved quality of life. NLEN works to reach the overall population-level strategic goals of reducing and preventing community violence and lowering the unemployment rate of North Lawndale by 10% through holistic employment and supportive services, and community collaboration.

According to the Chicago Metropolitan Agency for Planning (CMAP) 2021 North Lawndale Community Data Snapshot, the per capita income of North Lawndale is \$15,383, and nearly 16% of its 35,000 residents are unemployed (compared to 5% citywide), while 46% are not in the labor force at all. Half of the population of North Lawndale is younger than 34. Furthermore, a study commissioned by NLEN found 57% of the adult population in North Lawndale had some involvement with the criminal legal system.

NLEN is more than a workforce development agency; we are a social justice organization that uses innovative community initiatives to undo the devastating impact of historic disinvestment on Chicago's West Side. NLEN responds to the critical needs in North Lawndale through our neighborhood-focused initiatives that address the root causes of poverty, including beelove, a hive-to-jar product line subsidiary of NLEN (through our Sweet Beginnings program), and the beelove cafe. Both hire from North Lawndale.

While these social enterprises have been successful, there is an urgent need to ensure that the emerging conservation and green jobs sectors prioritize organizations like NLEN and the residents of North Lawndale.

Urban Conservation & Environmental Stewardship

Environmental racism is purposeful, targeted at Black and Indigenous people of color (BIPOC), and has already created negative consequences for future generations.

Racism is prevalent in our society. It is experienced in all systems be it education, healthcare, housing, penitentiary, and/or legal. Thus, there is also an alarming rate of discrimination and oppression taking place regarding how we take care of the environment.

Environmental racism is purposeful, targeted at Black and Indigenous people of color (BIPOC), and has already created negative consequences for future generations.

According to Jennifer Perrine, environmental racism began during when Madison, “Madison Grant, Irving Fisher, and Gifford Pinchot—who

\$3.7B

Of the \$3.7 billion of conservation and environmental awards that were given, \$498 million went to BIPOC-led organizations (13%).

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oversaw or helped to establish national parks, forests, and wildlife refuges under President Theodore Roosevelt—also authored treatises that advocated for White supremacy and eugenics (Perrine, 2023). This “white ideal of nature” (Mullenbach et al., 2022) and idea of the environment solely for and cared for by white people, has inculcated white preferential treatment in nature-based institutions and industries. For example, the Sierra Club choosing not to engage with “poor and ethnic minorities”, set a precedent for an acceptable environmental racism that BIPOC still experience today.

According to the Closing the Gap Report (2021), in the five-year period from 2014 through 2018, BIPOC-led environmental and conservation organizations received \$2.7 billion less than white organizations. Of the \$3.7 billion that were given, \$498 million went to BIPOC-led organizations.

This is even more alarming considering that these inner-city BIPOC communities experience more pollution and environmental toxic waste, poor drinking water, and are at risk for more dire climate adversity (Mullenbach et al., 2022, Morales et al., 2022). In fact, according to the Environmental Protection Agency, BIPOC communities are the first and worst affected by natural disasters and heat waves.

In this way, environmental racism is the deliberate white ideals of nature and the “disproportionate impact of environmental hazards on people of color” (Aneesh et al., 2020). One of the first acknowledgements of the latter took place when the United States General Accounting Office published a [1983 report](#) that found that 75% of communities adjacent to toxic landfill locations were primarily Black. According to a [2008 study](#), Black families are prone to have more



Artwork by Sergio Maciel and Provoke Culture

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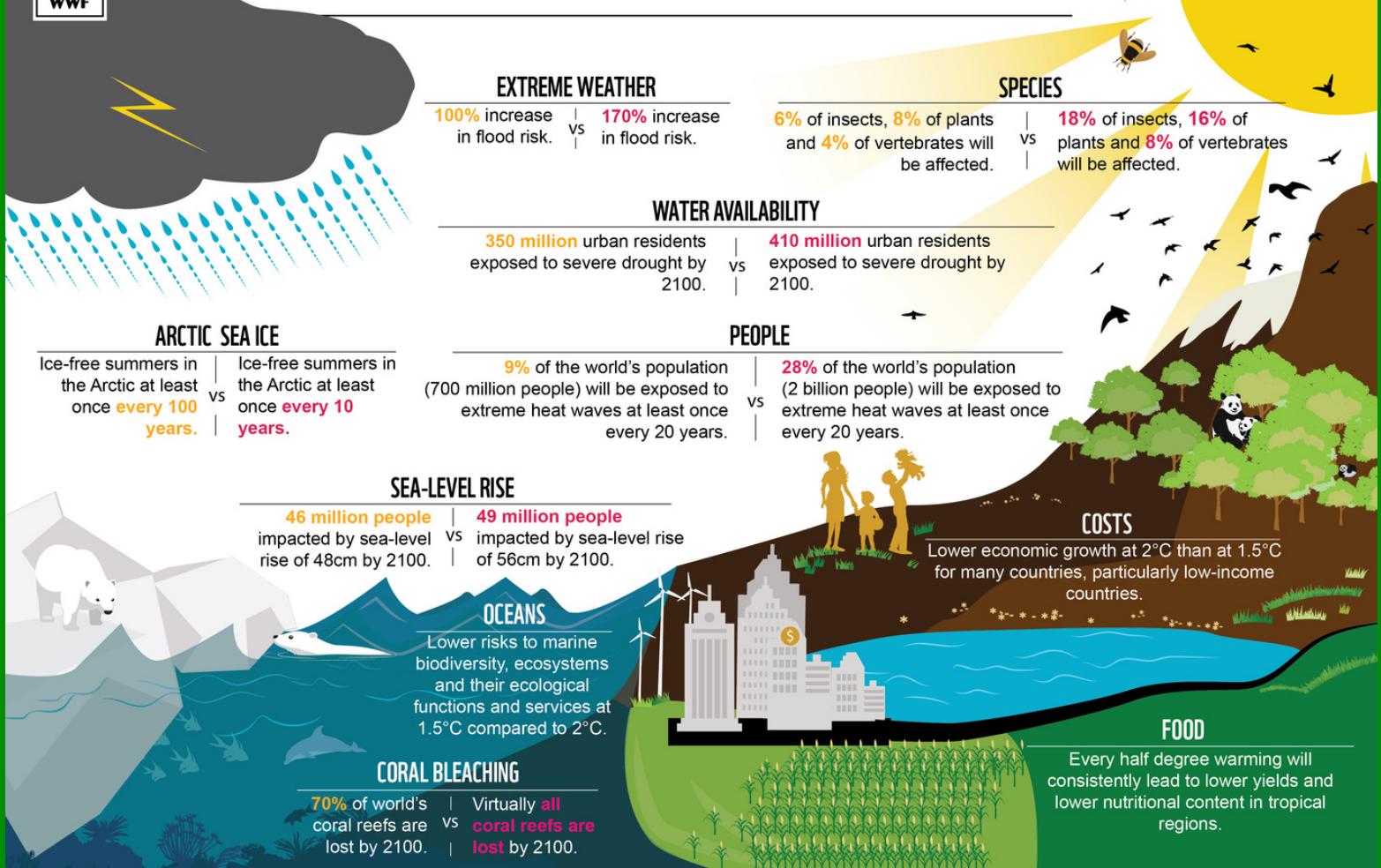
air pollution even when income levels are the same with white families. Asthma deaths tend to be four times higher. In 2019, the [Proceedings of the National Academy of Sciences](#) found that even though white people mostly produce air pollution, it is typically inhaled by BIPOC communities. Black communities in Houston, Chicago, and Baltimore are also disproportionately impacted by flooding (National Academies of Sciences, Engineering and Medicine, [2019 study](#)).

“White counties saw an increase in average wealth after natural disasters while predominantly minority counties saw a wealth decrease” ([Rice University Study](#)).





CLIMATE RISKS: 1.5°C VS 2°C GLOBAL WARMING



Artwork by WWF

95%

There is a 95% certainty that humans are responsible for global warming. In particular, wealthier populations are most responsible, yet, low-income populations will experience most of the impacts.

35%

Upwards of 35% of the food we eat will not exist if bees become extinct. Due to climate change, many of the bee species are threatened.

2B

About 28% of the world's population (2 billion people) will be exposed to extreme heat waves at least once every 20 years.

410M

Over 410 million urban residents will be exposed to severe drought by 2100. This will lead to shortages related to water, housing, and food.



Erik McGregor/LightRocket via Getty Images

Environmental Justice

BIPOC's collective response to 500 years of oppression and injustice, is environmental justice. The environmental justice movement began in the late 1960s, when BIPOC began to resist constantly being subjected to inordinate amounts of toxic waste, air pollutants, and chemicals (Aneesh et al., 2020). Environmental justice demands that BIPOC are treated with respect and dignity in regards to climate, conservation, and the environment.

In addition, it calls for the “fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (Aneesh et al., 2020).



Beth Lebarge & Ten Strands

BIPOC Urban Conservation and Environmental Stewardship

“We are the original conservationists.”

JENNIFER PERRINE

National Analysis

There are many BIPOC-led (and BIPOC-centered) conservation and environmental organizations around the country. These organizations are either led by BIPOC, or they center them in their work. Many of these organizations also work specifically with justice-involved individuals to create meaningful impact. They are models to follow and learn from as both contributors and innovators as younger generations are reclaiming environmental stewardship and conservation.

One example of such organizations is the Forestry and Fire Recruitment Program (FFRP) in San Francisco, California. This organization is both Black-led, and for justice-involved individuals. FFRP is a nonprofit organization that provides career support to formerly incarcerated firefighters and those currently incarcerated in California's Conservation Camps; who are interested in careers in the Wildland and Forestry sector. FFRP was developed in direct response to the growing need for wildfire-related personnel. Their mission is to

increase wildfire personnel from non-traditional and underrepresented communities, providing them the training, skills, resources, and experiences needed to secure gainful employment. FFRP believes that individuals who have been or are currently incarcerated in state correctional Conservation Camps "Fire Camps" should have the opportunities and support needed to attain gainful employment in the sector once home. Doing so provides their communities a tangible way to address the ever-growing threat of wildfires while supporting formerly incarcerated firefighters as they navigate reentry.



Forestry and Fire Recruitment Program

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FFRP is a network of formerly incarcerated firefighters. During pre-release, FFRP participants gain important information and resources needed for successful career planning. During post-release, FFRP participants receive critical job coaching, on-the-job training, paid work opportunities, and ongoing professional development. FFRP strives to ensure formerly incarcerated firefighters have the support needed to find long-term career success once released from state correctional Conservation Camps.

One of FFRP's primary community partners is the Urban Association of Forestry and Fire Professionals. They operate a Type 2 fire department, the Buffalo Handcrew, that offers fire prevention and suppression services to private homeowners. They are a partner and co-agency with FFRP, offering transitional job opportunities to graduated participants.

Another model is Civic Works in Baltimore, Maryland. Civic Works strengthens Baltimore's communities through education, skills development, and community service. They succeed by harnessing the energy and dedicated commitment of our AmeriCorps members, staff, volunteers, sponsors, partners, and most importantly, the communities in which they work.

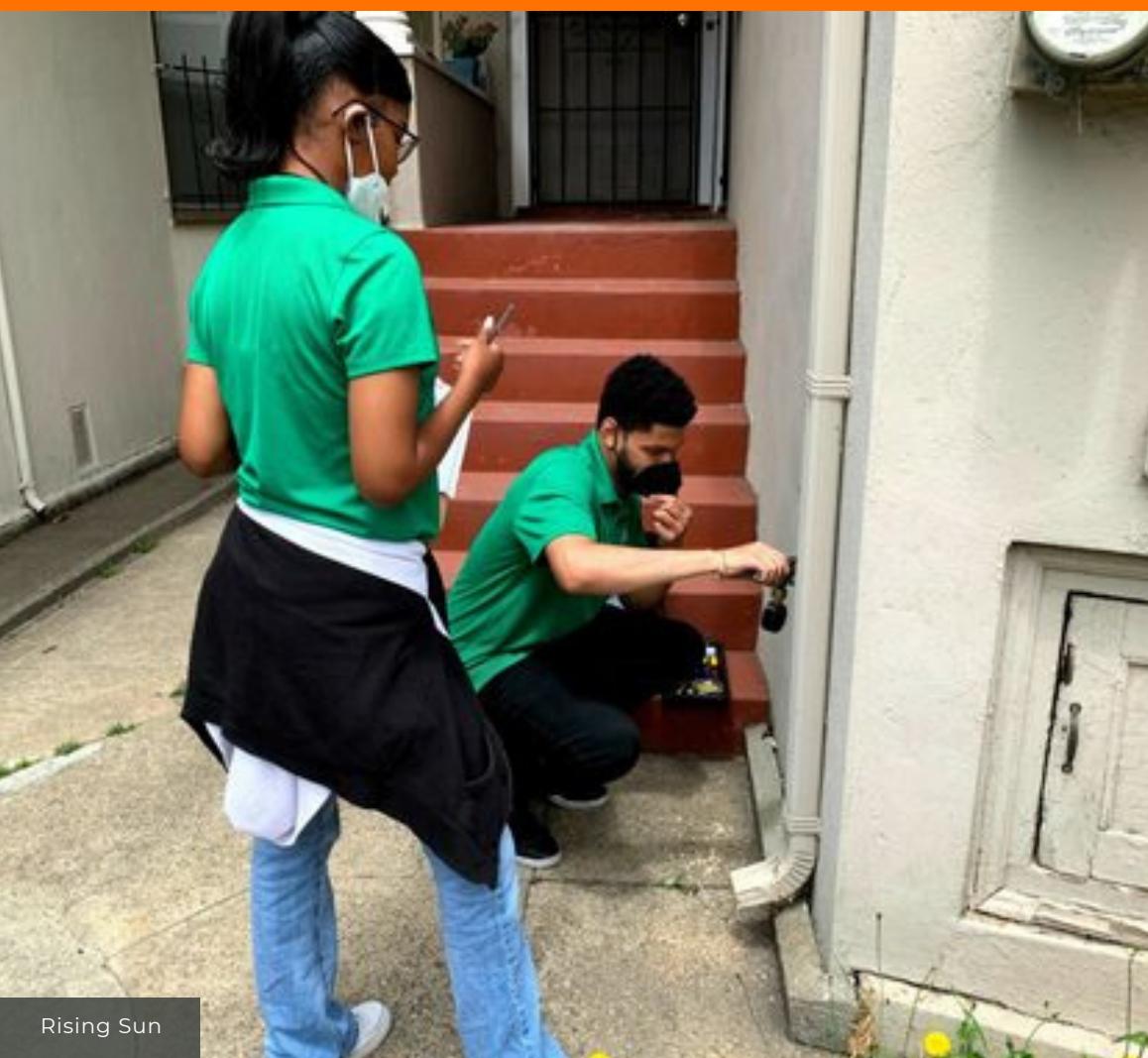
To date, they have had 56,692 volunteers assist with community service projects. They placed 1,216 participants in healthcare and green jobs. They have had 5,910 Americorps members, and 25,875 households are receiving energy efficient improvements. They also improved 4,575 older households with safety modifications, and turned 286 vacant lots into community green spaces. This includes planting 25,712 trees. They also grew or distributed 274,407 pounds of fresh produce to local communities.



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Another example is Rising Sun in Oakland and Stockton, California. With offices in Oakland and Stockton, their workforce development programs specialize in preparing youth, women, and individuals in reentry for high-road careers and green pathways that offer family-sustaining wages. Their Climate Careers program provides energy and water efficiency services, called Green House Calls, to households throughout the Greater Bay Area and City of Stockton.

Their Climate Careers social enterprise offers young leaders the opportunity to gain paid, hands-on work experience while taking climate action. Opportunity youth (18-24 years old) take part in an in-person or virtual Green House Calls by completing their 15-minute online survey to determine someone's personalized efficiency needs. As an Energy Specialist, young leaders spend the summer helping residents save energy, water, and money through Green House Calls. They take part in workshops, network, and gain a true feel for environmentally conscious work, culminating in a paid externship placement with one of Rising Sun's partners.



BIPOC Urban Conservation and Environmental Stewardship

Regional Analysis

There are also many Midwest models that feature BIPOC and are led by BIPOC as well. One such organization is the Land Stewardship Project (LSP) in Minneapolis, Minnesota. LSP is a private, nonprofit organization founded in 1982 to foster an ethic of stewardship for farmland, to promote sustainable agriculture, and to develop healthy communities. LSP is dedicated to creating transformational change in the food and farming system. LSP's work has a broad and deep impact, from new farmer training and local organizing, to federal policy and community based food systems development. At the core of all their work are the values of stewardship, justice, and democracy.

By becoming a member of LSP, one is able to put their values into action and fund the on-the-ground work to keep the land and people together. LSP has over 4,400 member households who are united together to advance positive change, as well as with a broader nationwide movement of organizations seeking to build healthy and vibrant communities for everyone and in the right relationship with the land.

Another notable regional organization is the Midwest Renewable Energy Association (MREA). Established in 1990, the MREA promotes renewable energy, energy efficiency, and sustainable living through education and demonstration. Together with partners around the Midwest, they work to expand renewable energy adoption through innovative programs, renewable energy training, and educational events. Their programs and services respond to evolving energy issues, while empowering people to make wise lifestyle choices while also being accessible to the broadest possible audience.



Midwest Renewable Energy Association

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Another regional model is Recycle Force in Indianapolis, Indiana. RecycleForce is a nonprofit that is committed to reducing crime through employment and job training, while improving the environment through electronics recycling. Since 2006, RecycleForce has safely recycled more than 65 million pounds of electronic waste while providing job training to thousands of returning citizens.

RecycleForce creates a stronger civil society and increases public safety through job creation and recycling. This makes a positive impact on the environment, local and state economies, communities, and the lives of hundreds of formerly incarcerated men and women along with their families.



RecycleForce

Similar to Recycle Force are Repowered in St. Paul, Minnesota, and CompRenew in Grand Rapids, Michigan. Repowered (formerly Tech Dump and Tech Discounts) is a nonprofit social enterprise and local industry leader in electronics recycling and refurbishing — certified and ready to meet the communities' IT asset management needs.

CompRenew strives to protect businesses, people and the environment from the threat of improperly disposed electronic devices through best practice technology data management, asset recovery and recycling services, while fostering job readiness and computer literacy among at-risk populations in our community. Comprenew believes in supporting other nonprofits and does so by offering discounted computer equipment to organizations that provide assistance and training to at-risk populations. These community partners receive steep discounts on equipment for their computer labs.



Rising Sun



Black Oaks Center for Sustainable Renewable Living

BIPOC Urban Conservation and Environmental Stewardship

Local Analysis

There are also many local BIPOC-led and BIPOC-centered conservation and environmental organizations in Illinois as well. Many BIPOC communities are familiar with [Black Oaks Center for Sustainable Renewable Living](#) located in Pembroke, IL. They own an 80-acre farm that is completely off grid and powered by solar. They also have a Healthy Food Hub farmers market that they run in Chicago, and they are also one of the first Black permaculturalist educators in the country.

[Blacks in Green](#) [BIG] is national network born to close America's racial wealth gap via the new green economy, increasing Black household income and building oases of resilience against the harms of climate crisis. Its Sustainable Square Mile™ system implements their 8 Principles of Green-Village-Building™ introduced in 2007 to achieve BIG's theory of change: that only a whole-system solution could transform the whole-system problem common to Black communities everywhere; that ultimately self-sustaining Black communities.

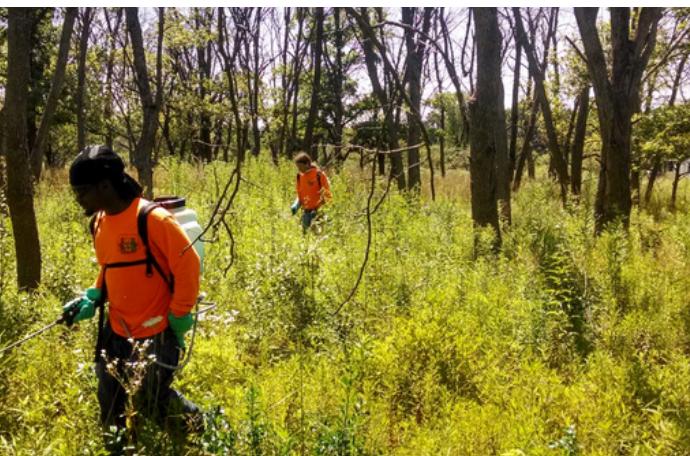
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everywhere would change our narrative of what it means to be Black in America; and that our communities would become synonymous with beauty, prosperity, comfort, and joy. BIG works to increase the rate that neighbor-owned businesses are created and sustained; build the capacity of neighbors to own, develop, and manage the property in their communities; and remember and reinvent the conservation lifestyle ~ where households produce their own energy, grow their own food, clean their own water, and recycle their

own waste. BIG's 2023 award of a \$10M EPA Environmental Justice Award supports BIG in sharing its Sustainable Square Mile system to underserved communities across the Midwest in a Biden-Harris initiative, "Thriving Communities Technical Assistance Centers" [TCTAC], created to provide free support for grant writing, capacity building, outreach and engagement, and project implementation, including open source access to BIG's 12-point energy justice portfolio.



Blacks in Green



Greencorps Chicago

The [Corps Network](#) has a membership of over 150 corps organizations across the United States. [Greencorps Chicago](#) promotes environmental stewardship and improves the quality of life in Chicago by establishing, maintaining and restoring natural and public spaces that are safe, healthy, and sustainable through hands-on involvement with program participants. The outcome is healthier, safer, and more engaged communities and individuals who are prepared for employment through practical field experience and technical training in a variety of environmentally related jobs.

Greencorps Chicago is a public/private partnership between the [Chicago Department of Transportation](#) and [WRD Environmental](#). Greencorps' project-based model accomplishes daily technical skills and job readiness training while also developing and implementing meaningful projects that support regional sustainability and resiliency initiatives.

In addition, the [Illinois Stewardship Alliance](#), [Environmental Education Association of Illinois](#), [Environmental Law and Policy Center](#), and the [Little Village Environmental Justice Organization \(LEVEJO\)](#) are all examples of organizations that aim to center BIPOC communities in regards to land stewardship and conservation.

Also, [Lincoln Park Zoo \(LPZ\)](#) prioritizes conservation and provides environmental literacy education to local organizations. LPZ is a key partner with NLEN. They provided plants for our campus and provide horticulture education for our events, families, and participants.

Organizations like BIG and LEVEJO are essential because they promote the curation and proliferation of small organic community gardens, one of the key recommendations to address climate change.



Little Village Environmental Justice Organization

Conservation and Environmental Stewardship Inventory

There are many more local and national examples that should be highlighted. These organizations prioritize conservation and environmental stewardship and/or are on the front lines of climate resilience:

Key Indicator	Activity / Project	Data / Outcome
<u>National Black Environmental Justice Network</u>	Uplifting Black communities to address environmental justice disparities.	<ul style="list-style-type: none">• Through communication, development, and engagement• Memberships
<u>Black Farmers Index</u>	The largest, Free, most comprehensive directory of Black Farmers.	<ul style="list-style-type: none">• Farmers, ranchers, vegetable and fruit producers to beekeepers, fisherfolk, foragers, vintners & more
<u>Indigenous Environmental Network</u>	Indigenous communities and tribal governments to protect our sacred sites, land, water, air, natural resources.	<ul style="list-style-type: none">• Organizing campaigns, direct actions and public awareness, building the capacity of community and tribes
<u>Hip Hop Caucus</u>	Sign the petition: Stop the Expansion of the Petrochemical Industry!	<ul style="list-style-type: none">• Help us by signing petitions and speaking to your elected officials
<u>Urban Alchemy</u>	We invite communities to rebuild and restore a sense of pride and respect in urban spaces.	<ul style="list-style-type: none">• Neighborhood cleaning and revitalization• Provides jobs for returning citizens



North Lawndale Employment Network

Urban Beekeeping

National Analysis

Beekeeping is happening across the nation. And while it is predominantly practiced in rural environments, there is growing movement of urban beekeepers and urban. This growth is largely due to the growth of local community gardens in urban spaces. It is fitting, since the relationship between bees and plants is in many ways, an interdependent relationship. There is a need for more beekeeping, more local organic community gardens, and less use of pesticides and less cutting residential lawns so urban bee populations can thrive.

Currently, the global market size of honey is valued at \$8.58 billion in 2021 and is poised to grow to \$12.9 billion by 2030.

In addition to these opportunities, there are also a few challenges, particularly maintaining hives in colder climates. Typically, a hive or colony may decline by 10%, but some report a decline of 35-45% over winter months. In addition, there are diseases and instances of Colony Collapse Disorder, where the entire hive can disappear and leave behind a queen.

BIPOC Urban Beekeeping

Regional Analysis

There are many Midwest models that feature BIPOC urban beekeeping. One such organization is [Detroit Hives](#) in Detroit, Michigan. Detroit Hives Detroit Hives is a 501c(3) non-profit organization working to create sustainable communities and bee populations by transforming vacant lots into pollinator friendly spaces. The idea for Detroit Hives was sparked in the winter of 2016 when Timothy Paule Jackson discovered that local raw honey was able to cure a cold that no other remedy had. After learning about the medicinal properties of honey and seeing how it was able to provide his immune system the boost it needed, he and partner Nicole Lindsey became fascinated with bees.

Both being proud Detroit natives, they recognized the abandoned lots in the city could serve a greater purpose and combined their new knowledge with a need in the community. They bought their first lot in 2017, started their first urban bee farm, and Detroit Hives was born. They've generated buzz with their work, expanding to other lots, multiplying their number of hives and continuing to build their colony ever since.

Our founders created Detroit Hives with the purpose to bring diversity and cognizance to bee awareness and rebuilding inner-city communities introducing Detroit as the place to "BEE". The bee farms that Detroit Hives creates provide safe homes for bee colonies to live, feed and grow. Bees need our help and protection because they have seen population declines over the past several decades. By transforming vacant lots in the inner city, we are cleaning up local neighborhoods and adding value to our community, making them safer and stronger. When we plant gardens at the farms we provide food for the bee colonies and in turn, they pollinate our plants, increasing fresh vegetable harvests for the neighborhood residents.



Detroit Hives

25%

of bee species are at risk of extinction
and more than half of our 4,000
native bee species are in decline.

80%

of bees nest in the ground, while
others build nests above ground in
wood and stone. Protecting bees
includes not harming or disrupting
their habitats and environments.





North Lawndale Employment Network

BIPOC-Led Urban Beekeeping

Local Analysis

There are also many local BIPOC-led urban beekeeping organizations in Chicago. In 2004, NLEN launched its first social enterprise Sweet Beginnings, a beekeeping and honey business in North Lawndale whose mission is two-fold: To create jobs for women and men facing significant barriers to employment while fostering a deep appreciation for and commitment to protecting our complex ecosystems. The company has 19 years of experience managing apiaries through Chicagoland, including beekeeping, extracting,

and harvesting honey and currently manages 34 beehives at three Chicagoland locations, including O'Hare Airport, making it the largest operator of urban beehives in the city. The company produces beelove®, a Certified Naturally Grown and all-natural line of raw, urban honey and honey-infused skincare products sold at our campus, online, and throughout the city, including at Mariano's grocery stores, and Hudson News at O'Hare and Midway Airports. Through beekeeping, Sweet Beginnings achieves its social mission to employ people with



multiple barriers to employment while preparing them for sustainable employment and careers in growing industries. Workers gain experience in beekeeping, production, packaging, inventory management, and customer service. This training, in an earthminded, green industry, transfers to jobs in manufacturing, food service, distribution, warehousing, hospitality, customer service, and more.

Sweet Beginnings elevates humanity one jar at a time. With transitional jobs at Sweet Beginnings women and men restore their sense of self-worth, regain family connections, and meaningfully contribute to their communities. We have employed 757 workers to date with more than 75% transitioning to unsubsidized jobs and 85% of retaining those jobs for the long-term. Sweet Beginnings workers have less than 10% recidivism rate.

In addition, there is the Westside Bee Boyz, also located in Chicago. is uniquely positioned to serve as a business incubator and learning lab. By incorporating sustainable methods into neglected and abandoned properties, Westside Bee Boyz serves as an Urban Action Center for sustainable community development and an urban outpost for Midwest permaculture studies.

Akron Honey in Akron, Ohio, Our Urban Honey is true 'hive to jar'. They respectfully raise our honeybees in Akron's neighborhoods, harvest only their surplus in small batches, without filtering or straining. Hoodhoney in Cleveland, Ohio, also provides hive installations and beekeeping education for the community.



Sweet Beginnings

Urban Beekeeping Inventory

There are many more local and national examples that should be highlighted. These organizations prioritize conservation and environmental stewardship and/or are on the front lines of climate resilience:

Key Indicator	Activity / Project	Data / Outcome
<u>Cook Dupage Beekeepers Association</u>	Promoting the general interests of bee culture and the production and use of honey and other apiary products.	<ul style="list-style-type: none">• facilitate educational opportunities about beekeeping
<u>Best Bees</u>	Resources to inspire BIPOC beekeepers.	<ul style="list-style-type: none">• Installs and maintains honeybee hives on commercial and residential properties in urban centers.
<u>Chicago Honey Co-op</u>	Indigenous communities and tribal governments to protect our sacred sites, land, water, air, natural resources.	<ul style="list-style-type: none">• Organizing campaigns, direct actions and public awareness, building the capacity of community and tribes
<u>North Lawndale Greening Committee</u>	Create a greener, healthier, and safer community where people of all ages have places to meet and play.	<ul style="list-style-type: none">• Help us beautify the community and create safer spaces
<u>UIC Plant Research Laboratory</u>	The lab consists of a 10,000 square foot greenhouse and outdoor garden space.	<ul style="list-style-type: none">• Study native prairie composition and structure here• Has its own beehive!

Climate Action

Local Analysis

Climate action is understood as the changes needed for an organization, municipality, or state to address climate change. In Illinois, the Climate & Equitable Jobs Act (CEJA) sets a goal for Illinois to be 100% carbon-free power by 2045. In addition, the Illinois Department of Natural Resources has a Climate Action Plan which serves as a roadmap for zero greenhouse gas emissions by 2050. This plan calls for reducing emissions in operations, buildings, and transportation.

There is also a concerted effort at the local level as well. Both Mayor Johnson's transition report and environmental plan lean into creating more accountability regarding climate action. In the report, Mayor Johnson calls for the Decarbonization of the Workforce, Decarbonization of the Environment, and a Green New Deal for Schools. He highlights urgency in growing a green workforce. He even proposes creating a Chicago City Climate Corps. He also re-established the Department of Environment and wants to build community solar on all publically-owned rooftops.

Mayor Johnson's environment plan also proposes a series of reforms for south and west side neighborhoods aimed at fighting environmental racism. In an effort to address the overpopulation of Black and Brown communities, the Mayor proposes better response time to environmental complaints, air-quality measuring, addressing air-pollution, public engagement around planning and development, and investments in environmental justice communities.



Chicago Mayor Brandon Johnson

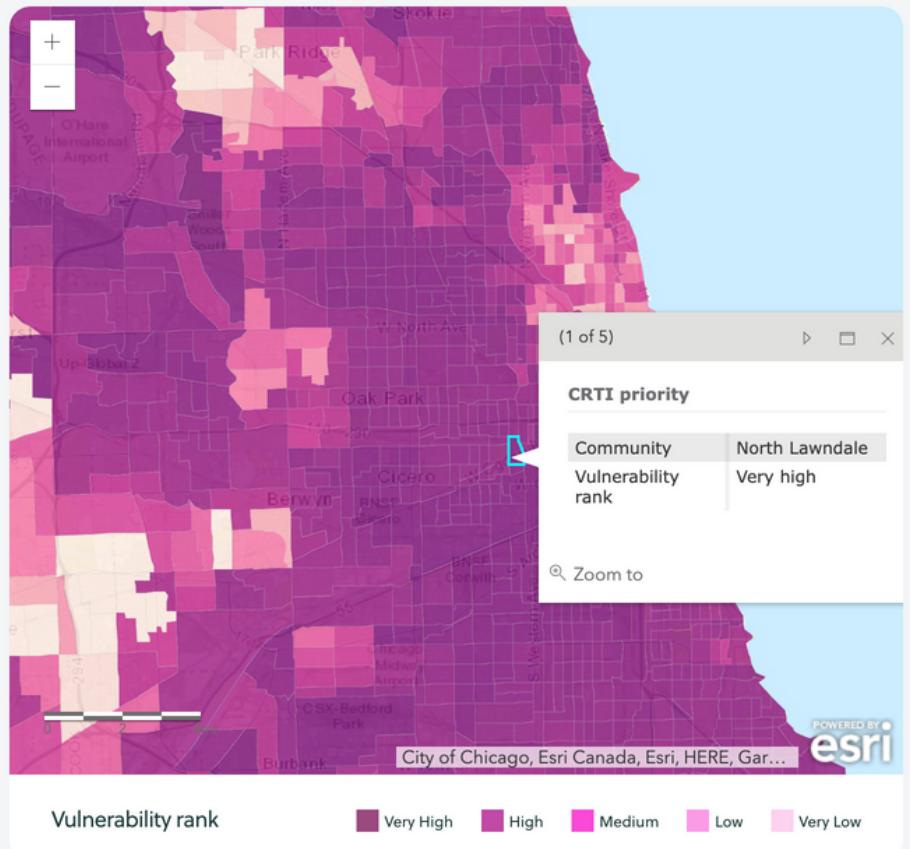
Vulnerable Populations

Trees can also improve people's quality of life.

They increase property values, and people who live around trees are healthier and happier. The benefits that trees provide are especially needed in underserved, vulnerable communities. This data set identifies which tree census block groups are the most vulnerable by distinguishing those with low incomes, non-English-speaking, and a high proportion of minority populations.

UP NEXT

Priority Areas



Temperature

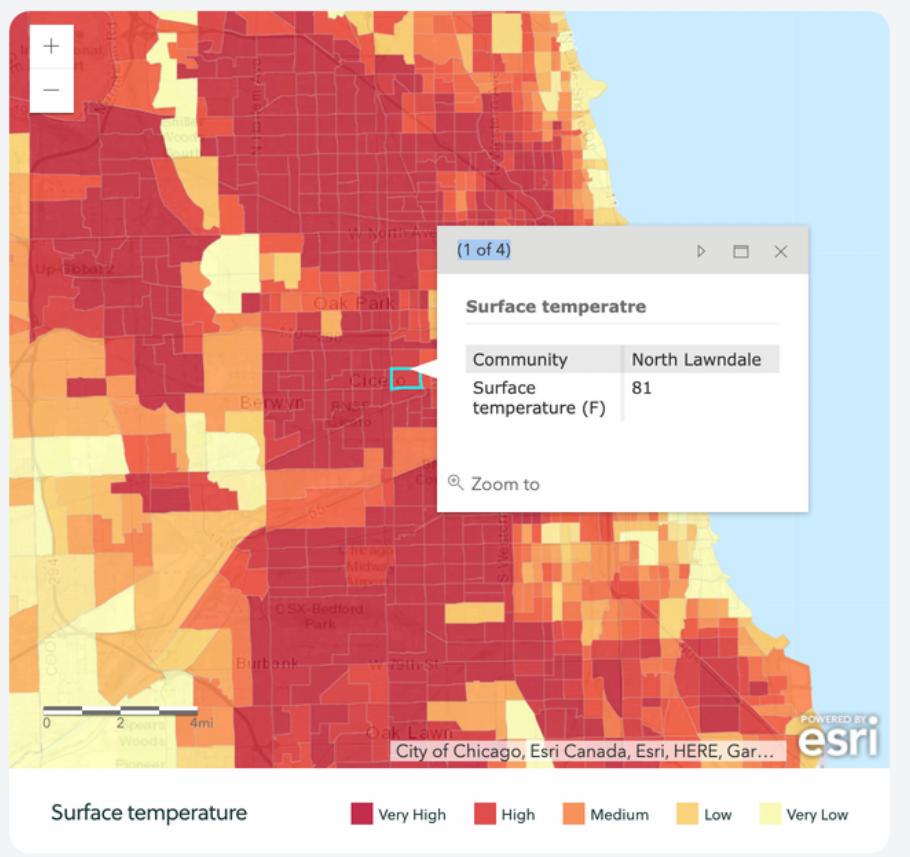
Trees keep our neighborhoods cool.

Urban areas tend to be hotter because concrete and other built surfaces absorb the sun's energy and release it as heat, raising temperatures to dangerously high levels that make cities less livable and require more energy for cooling.

This map shows the average temperature for each community. There is a direct correlation between canopy cover and excessive heat; areas with more trees tend to be much cooler. Temperature data were derived from a satellite image that was taken in September of 2014.

UP NEXT

Flood Risk



Chicago Region Trees Initiative

Chicago, IL

Flood Risk

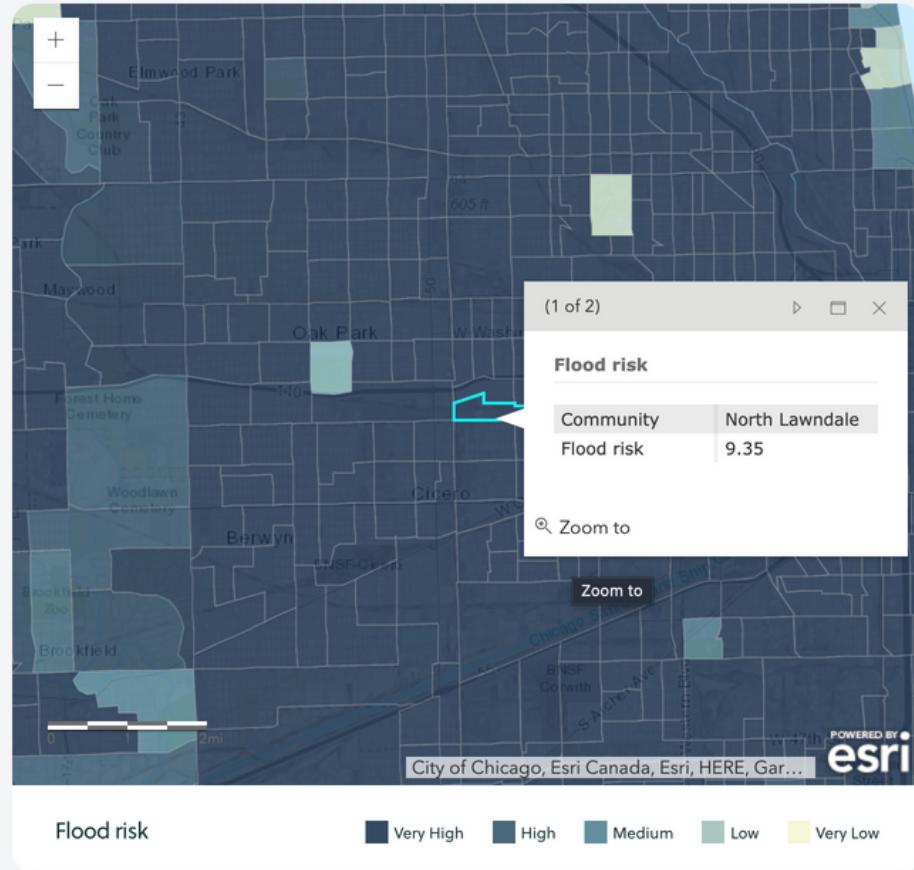
Trees intercept stormwater and reduce stormwater runoff.

Their leaves hold rainwater, preventing it from entering the sewage system. Trees also remove water from the ground in a process known as evapotranspiration.

This map shows how susceptible each community is to flooding. Higher values indicate more susceptible areas.

UP NEXT

Air Quality



Air Quality

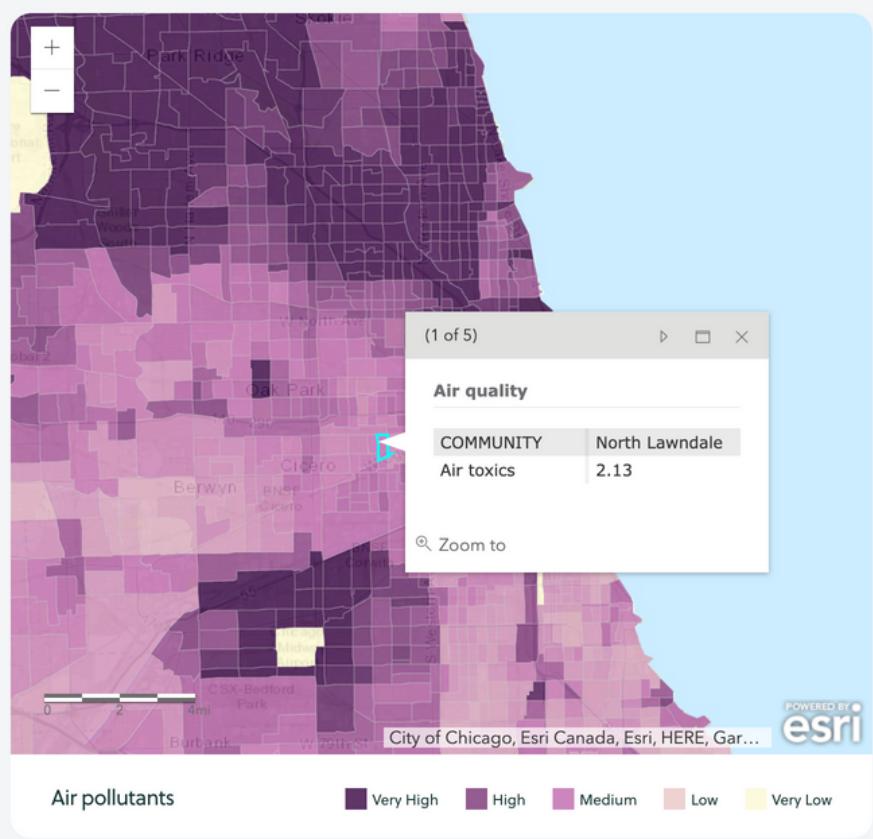
Trees help keep our air clean and breathable.

Their leaves intercept airborne pollutants and store carbon. Trees that are planted in areas that have poor air quality can improve the health of residents.

This map shows air toxins as measured by the Environmental Protection Agency. Higher numbers indicate areas with more airborne toxins.

UP NEXT

Vulnerable Populations



Chicago Region Trees Initiative

Chicago, IL

Climate Equity

Climate Resilience

Climate Justice

Access to:

- information
- relationships
- land
- resources

Develops:

- sovereignty and self-direction in response to climate crisis

Builds long-term resilience that is:

- community-led
- deeply informed
- organized
- prepared for rapid response
- well-resourced

- people are well resourced, engaged, and informed
- decision makers are community leaders

- emergency response, infrastructure investment, and economic development are rooted in climate equity and justice and ensure healthy environments

Foundational understanding that BIPOC communities are:

- disproportionately impacted by structural and environmental racism
- most vulnerable to climate crisis events

Climate Justice solutions

- prioritize long-term BIPOC community resilience

miro

Climate Justice Initiative - City of Asheville, North Carolina

As shown above, in order for climate action to truly serve vulnerable populations, it must be led by communities that are enduring the most climate resilience. Municipalities must be able to deliver on both climate equity and climate justice. In Chicago, it is long overdue.

A big part of the challenge for Chicago is that the infrastructure is in dire need of repair. While there is federal funding for these kinds of climate action projects, timeline for said projects is long-term. In the short-term, organizations must build coalitions to support collective climate resilience measures and initiatives.

Mayor Johnson's administration has provided a plan, but the community needs to help create the roadmap.

In addition, government agencies, community based organizations, funders, and industry leaders must provide guidance.

Chicago's Office of Climate & Environmental Equity and the Department of Public Health's new [Chicago Cumulative Impact Assessment](#), is an example of a plan from Mayor Johnson's administration that challenges racist systems and neighborhood pollution in neighborhoods like North Lawndale.

In order to truly have climate resilience, community development must be about caring for the land and the built environment. BIPOC-led businesses and organizations need to receive majority of the contracts and have preference regarding the various funding from state, local, and federal governments.

Clean Energy Jobs

Global Market Analysis

There is a growing demand of renewable energy or clean energy jobs across the world. The United States benefits greatly as more and more people become aware of the long-term savings associated with renewable energy. The receptivity of these clean energy alternatives also varies by region.

Typically, solar and electric vehicle usage is stronger in the West Coast. However, since there the Biden Administration's plan is to reach net-zero by 2050, these projects will likely increase as more and more state governments switch to clean energy.

Clean Energy Jobs Analysis

While these six industries and market sizes were selected, they are just a small sample of the amount of green jobs that exist and will be created through clean energy. When you add conservation jobs and environmental stewardship - and other jobs that are associated with these jobs - there are many opportunities in green jobs workforce development. It is critical to begin establishing partnerships with employers, local officials, community based organizations and funders so that new pathways can be created.

Global Market Size 2030

Clean Energy \$ 2.1t

The global Renewable Energy market size was valued at \$856.08 billion in 2021, and is predicted to reach \$2.1 trillion by 2030, with a CAGR of 9.6% from 2022 to 2030

Solar Photovoltaic \$ 551b

The global Solar Photovoltaic (PV) market size was valued at \$174.52 billion in 2022 and is predicted to reach \$551.25 billion by 2030 with a CAGR of 17.9% from 2023-2030.

Forestry \$ 2.1t

The Global Forestry and Logging market size grew from \$981.76 billion in 2022 to \$1.1 trillion at a CAGR of 10.3%. It is expected to \$2 trillion in 2030.

Green Construction \$ 774b

The global Green Construction market size is expected to reach a value of more than \$ 774 billion by 2030 increasing at a CAGR of more than 11.8% over the next 8 years.

Electric Vehicle \$ 1.8t

Electric Vehicle market size was valued at \$273.4 billion in 2021 and is predicted to reach \$1,869.9 trillion by 2030 at a CAGR of 24.4% from 2022-2030.

Electric Bike \$ 100b

The Global Electric Bike market size was valued at \$45.75 billion in 2021 and is predicted to reach \$109.53 billion by 2030, with a CAGR of 10.21% from 2022-2030.

1 megawatt (MW) of Solar Energy can Power 180 Homes



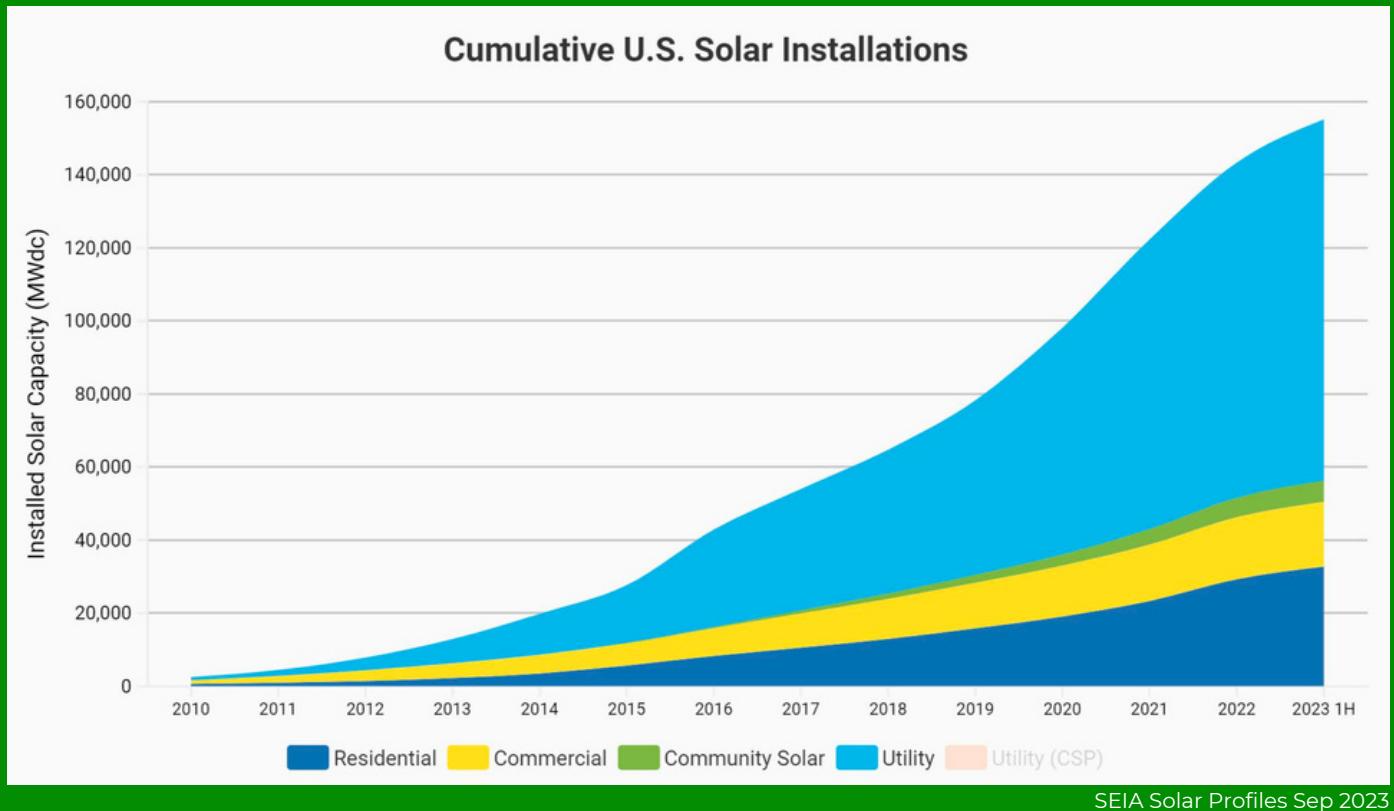
1 MW: 7 – 10 acres of land

5,000 panels

2,146 megawatt hours

enough electricity for between 120 - 180 average homes

avoids the equivalent of 5 railcars of coal burned



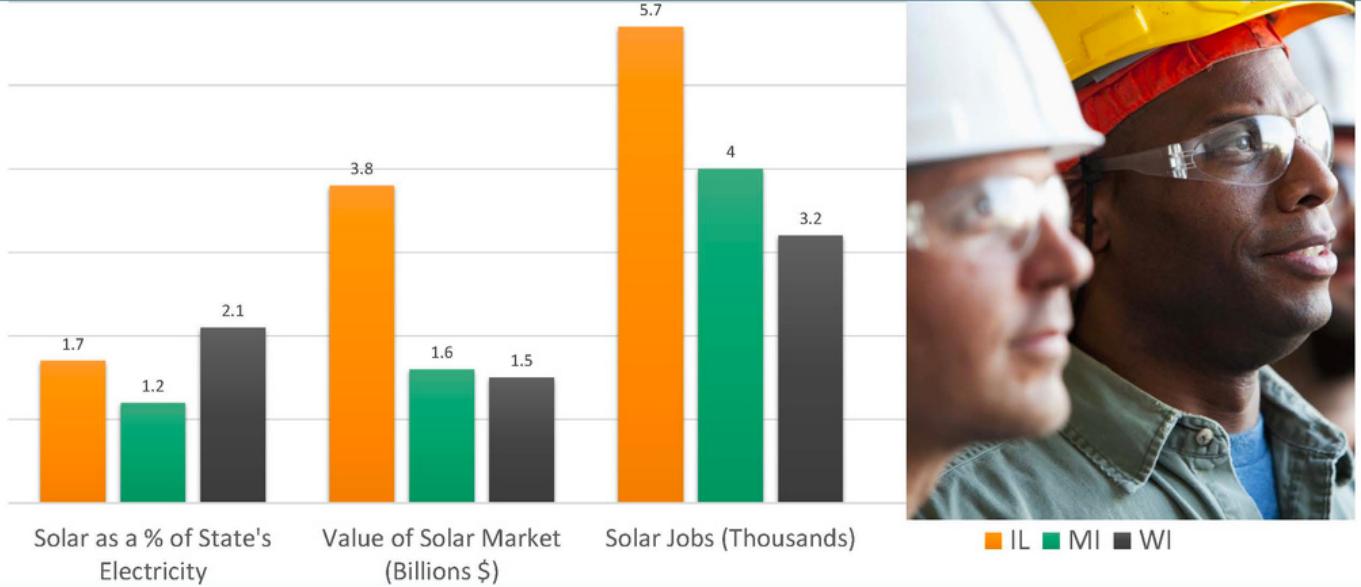
Clean Energy Jobs

Regional Analysis

There is a lot of clean energy in the Midwest. In fact, the 3rd largest operational onshore wind farm in the world is called the Muppandal Wind Farm located in Tamil Nadu, Indiana. It has the capacity of 25.5MW. In terms of solar energy, installations and usage is up across the U.S. This is also true about solar usage and installation in the Midwest. And the leader of solar usage and installations is not the state with the most farmland. The leader is Illinois.

Illinois is the leader in solar usage and installation due to both the Climate & Equitable Jobs Act (CEJA) and the Future Energy Jobs Act (FEJA). FEJA provides \$750 million for training for clean energy jobs and to help consumers cut their utility bills. In addition, CEJA sets Illinois climate standard by stating that it strives to be 100% carbon-free power by 2045. These laws insure a clean energy future that will be strong in Illinois and the region.

Solar Progress in the Midwest



SEIA Solar Profiles Sep 2023

Illinois has the largest percentage of net metered customers



SEIA Solar Profiles Sep 2023

Illinois Clean Energy Jobs Report (2021)

Job Title	Training required (ONET)	Total jobs in 2020 (IDES, unless otherwise indicated)	Annual openings IL in 2020 (IDES, unless otherwise indicated)	% growth 2020-30 (IDES, unless otherwise indicated)	Average salary 2021 (ONET)	Clean energy training focus
Wind turbine service technicians	1-3 years	1,643 (USEER)	164 (USEER)	45.7% (Lightcast)	\$66,823	Yes
Solar photovoltaic installer	3-12 months	1,582 (USEER)	158 (USEER)	22.9% (Lightcast)	\$52,344	Yes
Solar sales reps & assessors	1-2 years	487 (USEER)	49 (USEER)	22.9% (Lightcast)	\$107,005	Yes
Automotive service techs and mechanics	1-2 years	28,408	2,909	3.25%	\$48,313	Yes—specialty in EV
Bus and truck mechanics	1-2 years	11,528	1,204	9.49%	\$58,150	Yes—specialty in EV, hybrid, biodiesel
Electrician	1-2 years	24,704	3,006	12.73%	\$80,718	Yes—specialty in renewables, EV
Electrical & electronic engineering tech	1-2 years	2,985	280	1.71%	\$68,498	Yes—specialty in renewables, EV
Construction laborers (including weatherization)	3-12 months	39,508	4,444	10.37%	\$41,510	Yes—specialty in energy efficient construction
Carpenters	3-12 months	31,602	3,091	4.28%	\$60,340	Yes—specialty in energy efficient construction
Roofers	3-12 months	3,908	421	9.06%	\$60,850	Yes—specialty in energy efficiency, solar
Construction & building inspectors (including energy auditors)	1-2 years	2,105	227	-4.42%	\$66,280	Yes—specialty in green buildings & energy code, energy efficiency

Illinois Department of Commerce & Economic Opportunity (IDCEC)

Illinois Clean Energy Jobs Report (2021)

Job Title	Training required (ONET)	Total jobs in 2020 (IDES, unless otherwise indicated)	Annual openings IL in 2020 (IDES, unless otherwise indicated)	% growth 2020-30 (IDES, unless otherwise indicated)	Average salary 2021 (ONET)	Clean energy training focus
HVAC/R Mechanics & Installers	1-2 years	8,968	967	9.52%	\$56,643	Yes—specialty in energy efficiency
Maintenance & repair workers, general	1-2 years	64,626	6,994	9.98%	\$49,204	Yes—specialty in energy efficiency, electrification
Plumbers, pipefitters & steamfitters	1-2 years	17,649	2,038	9.56%	\$95,090	Yes—specialty in energy efficiency
Industrial maintenance mechanics	1-2 years	13,611	1,680	27.21%	\$63,575	Yes—specialty in energy efficiency
Sheet metal worker	3-12 months	5,388	559	8.22%	\$64,860	Maybe
Machinist	1-2 years	28,493	3,280	9.06%	\$49,083	Maybe
Machine tool setters, operators, tenders	3-12 months	11,539	1,325	9.74%	\$42,369	Maybe
Welder, cutter, solderer, brazer	3-12 months	14,597	1,765	10.31%	\$45,994	Maybe

Illinois Department of Commerce & Economic Opportunity (IDCEC)

Clean Energy Inventory

There are many more examples locally and nationally that are doing great work and should be highlighted. These organizations prioritize renewable energy and/or are on the front lines of moving CEJA and FEJA forward:

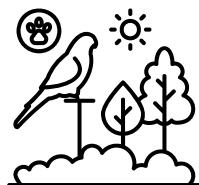
Key Indicator	Activity / Project	Data / Outcome
<u>548 Foundation</u>	Renewable energy workforce training & energy upgrades.	<ul style="list-style-type: none">• Black-owned• Energy advocacy and incubation
<u>Reactivate</u>	Building equity in solar training for individuals from underserved or disadvantaged places.	<ul style="list-style-type: none">• Renewable jobs are set to hit 1 million by 2030• Provides trainings for individuals 18+
<u>Invenergy</u>	Meeting your clean energy needs with a portfolio of proven and emerging technologies that capture, make, store and move energy at scale.	<ul style="list-style-type: none">• Empowering you with a broad array of clean energy possibilities
<u>Sēsēnērgi</u>	We provide climate friendly, closed loop energy solutions for residential, commercial and government agencies.	<ul style="list-style-type: none">• Comprehensive assessment of our clients needs and design a customized, state of the art energy solutions
<u>Elevate</u>	Elevate wants everyone to have access to clean and affordable heat, power, and water in their homes and communities.	<ul style="list-style-type: none">• We provide access and resources to the people we serve, supporting them to become leaders in climate action

Conclusion

There will be a 52% growth of solar installers by 2030.

Illinois and Chicago are well-positioned to benefit from all of the national and global expansion of clean energy jobs. Both solar installers (52%) and wind turbine installers (68%) will see a growth in jobs in the next ten years.

The time is now to create partnerships and pipelines in the industry that lead to jobs for BIPOC and justice-involved individuals.



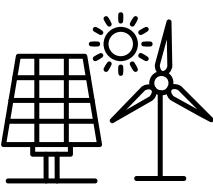
ENVIRONMENTAL & CONSERVATION JUSTICE

Policies, laws, and practices need to be created that identify, name, and outline harm that has been caused to BIPOC. Conservation and environmental organizations and funders need to shift resources.



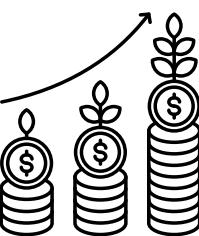
CLIMATE RESILIENCE

Chicago is set to follow other cities like Los Angeles and San Francisco with Climate Action Plans that aim to right wrongs committed by previous administrations. This needs to be BIPOC-led.



CLEAN ENERGY JOBS

Clean energy jobs have the ability to provide the a restorative green workforce development opportunity. With so much happening in the city and state, organizations must create new coalitions and partnerships.



SUSTAINABLE ECONOMIC GROWTH

Sustainable economic growth is the result of environmental justice, climate resilience, and clean energy jobs piloted by BIPOC. This is equity. This is sustainable development.

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We thank you for your continued support and ask you to join us in our efforts to protect and preserve native pollinators.

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