

# Greenworks

a year in review [www.phila.gov/green](http://www.phila.gov/green)

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# THE ENVIRONMENTAL JUSTICE ISSUE

The Movement for A Sustainable Future



# Greenworks at a Glance

*Catching You Up on Philadelphia's Sustainability Plan*

In 2016 the Office of Sustainability (OOS) published *Greenworks: A Vision for a Sustainable Philadelphia*, which sets eight long-term visions that continue to guide our work:



ACCESSIBLE FOOD AND DRINKING WATER



HEALTHY OUTDOOR AND INDOOR AIR



CLEAN AND EFFICIENT ENERGY



CLIMATE PREPARED AND CARBON NEUTRAL COMMUNITIES



QUALITY NATURAL RESOURCES



ACCESSIBLE, AFFORDABLE, AND SAFE TRANSPORTATION



ZERO WASTE



ENGAGED STUDENTS, STEWARDS, AND WORKERS

## IN YOUR HAND



SEE PAGE 20  
FOR MORE  
INFORMATION  
ABOUT THE  
COVER ART

## **Greenworks: A Year in Review**

This magazine highlights local resources and shares information on how Philadelphia residents, students, community groups, artists, activists, and organizers are improving their neighborhoods for today and tomorrow.

## **FURTHER READING**

Visit our website at [www.phila.gov/green](http://www.phila.gov/green) for more information, including:

## **Monthly Newsletter**

Email us at [Sustainability@phila.gov](mailto:Sustainability@phila.gov) or check out our website to get monthly updates on local events, workshops, and more!

## **Reports and Publications**

Check out our library of reports, resource guides, and toolkits to learn more about the City's strategies around the eight Greenworks Visions.

## **OOS Blog**

Check out our blog for interviews with local leaders, summaries of current events, and details on local initiatives.



April 2022

Dear Friends,

This past year, the United Nations' Intergovernmental Panel on Climate Change released its latest assessment report. The report notes that past projections of how the climate would change are coming true, but that impacts are happening even faster than predicted.

In Philadelphia, we have seen these increased impacts, from hotter summers to more frequent and more severe storms. Hurricane Ida—and the flooding of I-676—was a wake-up call to many residents in understanding just how disruptive climate events may become for our city.

However, just a year before Ida, Tropical Storm Isais flooded over 600 properties in Eastwick in southwest Philadelphia. This storm did not get the same media coverage or attention, but was just as devastating for residents, especially for those who have repeatedly suffered damage from flooding in the community over many decades. Flooding in Eastwick is a textbook case of environmental justice, where a majority Black community was upheaved during an urban renewal project in the 1950's that left the community more vulnerable to environmental harms.

Eastwick is far from the only example. More and more evidence shows that while people of color contribute the least to the causes of climate change, they are more likely to be harmed by climate risks, such as flooding or extreme heat. In Philadelphia, we know that some communities can be as much as 22 degrees hotter than others, and that hotter areas are more likely to be communities of color. We also know that energy burden— or the percentage of income that is spent on energy bills— disproportionately affects communities of color. But despite this reality, too often the voices of those on the frontlines of environmental risks are not heard by decision-makers when creating policies, programs or budgets.

For decades, the environmental justice movement has demanded that all people—no matter race, income, age, or other factors—receive the same protection against environmental harms and access to environmental amenities.

That's why we're proud to have launched the City's first Environmental Justice Advisory Commission (see pages 18 to learn more). This Commission will work to ensure that all residents of Philadelphia, regardless of race, gender, income status or ZIP code, have a livable community, free of environmental toxins and hazards. Members of the Commission will provide recommendations to City agencies to ensure that environmental justice issues are acknowledged and acted on. Further, the Commission will ensure that City decision-making processes are transparent and accessible to those on the frontlines.

We look forward to working in deep collaboration with the Commission and in building a more just, sustainable and healthy city for all.

In partnership,



*James F. Kenney*

**James Kenney**  
MAYOR



*Christine M. Knapp*

**Christine Knapp**  
DIRECTOR, OFFICE OF SUSTAINABILITY

# Greenworks

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*The Office of Sustainability (OOS) works with partners around the City to improve quality of life in all Philadelphia neighborhoods, reduce the City's carbon emissions, and prepare Philadelphia for a hotter, wetter future. OOS is responsible for implementing Greenworks Philadelphia, the City's comprehensive sustainability plan.*

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## Eileen Flanagan

NOMINATED BY

**LINNEA BOND**

Eileen Flanagan is an award-winning book and article author, speaker, and activist. In addition to helping people to make their activism more effective through her online courses, she speaks to international audiences on how to build a spiritually grounded and effective climate justice movement. For five years, she served as board chair of Earth Quaker Action Team (EQAT), a scrappy little group that successfully pressured one of the largest banks in the US to stop financing mountaintop removal coal mining. Ahead of the 2020 election, she became the Trainings Coordinator of Choose Democracy, which trained nearly 10,000 people in nonviolent strategies to prevent a coup.

Eileen is passionate, hardworking, and inspiring, as she brings new people into EQAT and other spaces in which she is a leader. Through all her work, her compassion for others and empathy guides her, both as she centers righting inequity together in partnerships, and as she confronts executives with whom she disagrees in both power and love.





# Greenworks 2021 Year in Review



## A Plan For Philly's Trees, With A Focus On Environmental Justice

Over the past year, over 8,000 residents participated in the drafting of the Philly Tree Plan, the City's first-ever strategic plan for the equitable growth and care of its urban forest. With a focus on sustainability, environmental justice and community engagement, the Philly Tree Plan lays out a 10 year strategy to bring the benefits of trees to communities that need them the most, in ways that support them the best.

According to a Tree Canopy Assessment Report conducted in 2019, Philadelphia has lost 6% of its tree canopy cover over the last ten years. In a city where the average tree cover is only 20%—and as low as 3% in some communities—this constitutes a crisis that needs to be addressed.

Philadelphia Parks & Recreation led the creation of the Philly Tree Plan along with a project team of other City agencies, non-profits, and state and federal agencies, and a Community Voices Steering Committee. After hearing from residents about the joys and challenges that trees bring to their lives, the Project Team drafted a plan with eight goals (*see right box*).

The Philly Tree Plan lays out recommendations for both short term and long-term impact and identifies priority areas with the highest needs which will be used as the basis for measuring progress towards reducing inequities. Implementation of the Philly Tree Plan will begin in 2022. 🌳

### GOALS:

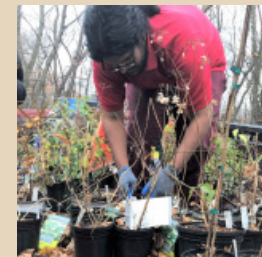
- 1 Reduce the burden of trees on residents
- 2 Protect the existing and future urban forest
- 3 Grow the urban forest equitably across the city
- 4 Invest in people and communities
- 5 Restore health in communities and natural systems
- 6 Improve communication and coordination
- 7 Advocate for communities to benefit from trees and urban forestry
- 8 Celebrate and support the ways communities are engaging with trees



## Kevin Sanchez

NOMINATED BY

JESSICA  
MCATAMNEY



Kevin Sanchez is a local climate action champion. Twice weekly he serves his internship at the Schuylkill Center for Environmental Education where he is assisting in earth and environmentally focused activities. Part of the life skills and visually impaired classroom, Kevin is responsible for the eco-internship and the responsibilities it carries.

Kevin is hard working, dedicated, and willing to go above and beyond. He is an example to the Philadelphia community at large of what service looks like and how it can be delivered. We are proud of Kevin's determination, success, and pride in the ecological movement that his Lankenau experience has enabled him to have!

### Protected Bike Lanes Double In 2021

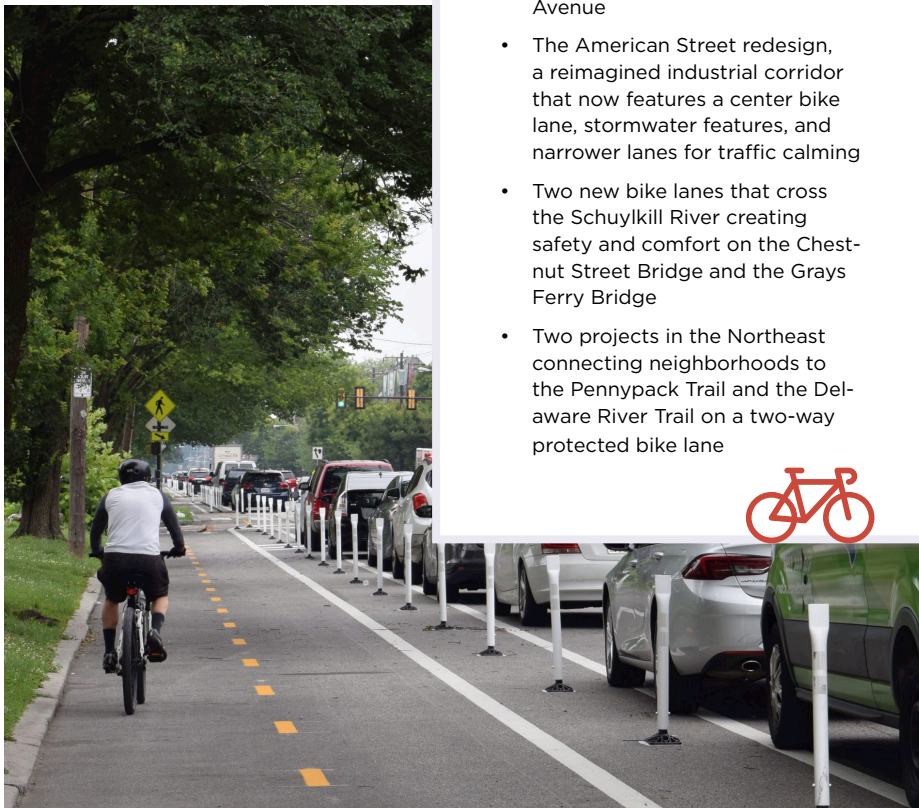
The number of protected bike lanes in Philadelphia doubled in 2021 to more than 16 miles with another three currently under construction. Accounting for two-way bikeways, that equals more than 13 bike lane miles for a total of nearly 25 protected bike lane miles in Philadelphia. The City's Office of Complete Streets (OCS) worked with partners to envision the bike lane network, share their safety benefits for all road users, and go through years of community engagement, planning, designing, and fundraising for projects.

This progress is possible only with Vision Zero supporters through partnerships with community groups, City Councilmembers, the Pennsylvania Department of Transportation and non-profit partners. Many projects completed this year were determined based on the City's High Injury Network, where 80% of crashes occur on only 12% of Philadelphia streets. OCS's approach to road and bike design is through a safe systems and complete streets lens.

These projects were made possible by funding from the City and PennDOT repaving funds, the Transportation Set-Aside Program grants, the Department of Community and Economic Development Multimodal Transportation Fund, state Automated Red Light Enforcement funds, and other sources. 🌟

#### PROJECTS IN THE PAST YEAR:

- North-south connections in Center City, along the Delaware River, and in the Parkside, Kingsessing, and Kensington neighborhoods.
- 10th, 6th, 5th, and 2nd Street installations to and from the Callowhill neighborhood
- A two-way bike lane along West Fairmount Park on Parkside Avenue
- The American Street redesign, a reimagined industrial corridor that now features a center bike lane, stormwater features, and narrower lanes for traffic calming
- Two new bike lanes that cross the Schuylkill River creating safety and comfort on the Chestnut Street Bridge and the Grays Ferry Bridge
- Two projects in the Northeast connecting neighborhoods to the Pennypack Trail and the Delaware River Trail on a two-way protected bike lane





## Philadelphia Releases Plan to Transition Municipal Fleet to Clean and Electric Vehicles

The Office of Sustainability, in partnership with the Office of Fleet Management, released Philadelphia's Municipal Clean Fleet Plan which lays out a strategy to transition the City's fleet of around 6,000 vehicles to clean and electric vehicles.

The City's fleet currently represents around 13% of the municipal government's carbon footprint and so tackling emissions from this sector is a necessary step in achieving Mayor Kenney's goal of carbon neutrality by 2050. Additionally, the transition will allow the City to achieve cost savings, improve air quality, support local job creation and to enhance Philadelphia's competitiveness among peer cities.

Among some of the Plan's key recommendations are:

- Setting new goals to create a pathway to zero emissions, including procuring no new gas-powered vehicles after 2030.
- Instituting a clean fleet procurement policy and establishing a vehicle procurement hierarchy that prioritizes battery electric vehicles, but also aims to reduce the overall size of the fleet and the share of SUVs.
- Establishing a Clean Fleet Committee, directed by a new Transportation Electrification Manager, and with participation from several City agencies to oversee infrastructure issues and track goals.
- Optimizing alternative fueling and recommend the development of an electric vehicle infrastructure deployment scenario to minimize the costs of charging infrastructure.

Led by the Office of Innovation and Technology's Smart Cities program, the City also released a request for information (RFI) to learn more about the metering options for electric vehicle charging infrastructure. This information will help determine a next step in procuring metering to capture data on energy use, costs, avoided emissions, and other operational information.\*



## Samantha Wittchen

NOMINATED BY

JESSICA HARTLEY



Samantha Wittchen is a seasoned sustainability professional whose work with manufacturing, municipal, and institutional clients has spanned energy efficiency,

water efficiency, waste reduction and diversion, carbon footprint measurement, sustainability outreach, evaluation and benchmarking. As a consultant to the City of Philadelphia's Recycling Office, she led the development of the City's first Commercial Recycling Toolkit as well as commercial recycling outreach efforts. She has led waste audits and the creation of waste and recycling signage and communications materials for clients such as the University of Pennsylvania, Swarthmore University, the Institute for Local Self-Reliance, and Green Philly.

As a citizen advocate for better materials management practices in Philadelphia, Samantha managed the website for the RecycleNOW campaign. She has written on recycling- and sustainability-related topics for Philadelphia-based Grid Magazine, Green Building and Design magazine, and Keystone Edge, and she has presented talks on recycling throughout the Eastern PA region. Samantha is a LEED Green Associate and holds in a B.S. in Mechanical Engineering from the University of Virginia.

Samantha is currently the Director of Programs & Operations at Circular Philadelphia, an organization that promotes the implementation of a Circular Economy in Philadelphia. Circular Economies minimize waste and reduce our carbon footprint.





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### State-of-the-Art Solar Training Lab Opens at Frankford High School

In October of 2021, Frankford High School cut the ribbon on a state-of-the-art Solar Training Lab to provide training opportunities in Pennsylvania's fastest growing careers in solar and clean energy. A partnership between the Philadelphia Energy Authority and the School District of Philadelphia, the Solar Training Lab will be used by high schoolers in the District's Bright Solar Futures program, a 3-year Career and Technical Education (CTE) vocational program, the first of its kind in the nation, that launches young people into the jobs of the future.

Bright Solar Futures (BSF), funded with grants from the U.S. Department of Energy's Solar Energy Technologies Office and PECO, provides access to solar careers for young Philadelphians, growing a diverse and more equitable workforce that will help make national climate priorities a reality.

At the ribbon cutting event, the Solar Energy Industries Association (SEIA) announced a new toolkit for prioritizing diversity, equity, inclusion, and justice in the solar industry. Called Energy Justice Partnerships (EJPs), this concept allows very large, utility-scale solar projects to easily partner with an organization providing equity and access to solar jobs and solar power for historically marginalized communities. EJPs will allow solar developers and corporate and institutional buyers to incorporate these partnerships into their power purchase agreements, creating long-term funding for front-line organizations, and using renewable energy to support communities who have traditionally borne the brunt of the effects of fossil fuel production. \*





### Plastic Bag Ban Implementation Begins

On October 1, 2021 the City of Philadelphia officially prohibited businesses from using single-use plastic bags and non-recycled content paper bags. The **Single-use Plastic Bag Ban** was originally passed by City Council in December 2019 but the launch was delayed due to the pandemic.

Philadelphians use almost 1 billion plastic bags each year, which litter our streets, waterways, and commercial corridors. Plastic bags account for over 10,000 hours of lost staff time and pose a danger to workers at recycling facilities because they get caught in the equipment. Banning plastic bags will make our city cleaner, reduce waste and save money.

After April 1, 2022, any retail establishment that fails to comply will be subject to violation notices which carry penalties of at least \$150. To avoid the need to issue fines, the City has been doing outreach to the business community, hosting educational webinars, advertising on LinkPHL kiosks and more. 🌱



### New Guidelines For Reusable To-Go Food Containers

Some of the most difficult items to keep out of the landfill are the waste from single-use items or products that are packaged in single-use containers. Food and beverages are common culprits of this take-and-throw habit, from paper coffee cups to polystyrene to-go food boxes – but they don't have to be! In October, the Philadelphia Health Department **issued new guidance** explaining how restaurants and food businesses can safely incorporate reusable to-go containers into their takeout service.

With this change, all existing food establishments in Philadelphia will be allowed to offer reusable containers without

applying for a variance and incurring fees, and new businesses will be required to check off that they are using reusable containers on their Food Establishment Plan Review. All food establishments will be required to follow specific guidelines on washing, drying, and storage of the reusable containers.

The Office of Sustainability's Zero Waste Guide for Foodservice Establishments in Philadelphia to reflect the most recent Health Department regulations now includes tools and resources to help business owners learn more and start using these containers as part of their regular takeout or to-go food service. 🌱





## Sustainability Efforts Take Off at the Airport

The Philadelphia Airport (PHL) continued its sustainability efforts during 2021, becoming one of only 20 airports in the country to achieve Airport Carbon Accreditation. PHL's Level 1 accreditation requires mapping and calculating the airport's annual carbon footprint. In the coming years, the airport plans to advance into future levels of accreditation which require setting, tracking and meeting carbon emissions reduction targets, in alignment with the City's carbon neutrality by 2050.

In an effort to reduce harmful emissions, PHL partnered with Southwest Airlines to install 13 electric charging stations that will allow the airline to utilize electric ground support equipment rather than gas-powered vehicles. This effort was funded by a \$1 million grant from the Federal Aviation Administration. PHL received another \$2.8 million in 2021 to convert pre-conditioned air units (which provide air circulation to planes while parked at the gate) that typically utilize diesel fuel to zero-emission electrical units. These efforts will reduce Volatile Organic Compounds by 5.6 tons, Nitrogen Oxide by 78 tons, and particulate matter by 5.8 tons over the next 13 years.

PHL set a new precedent in waste reduction, completing reconstruction of its airport apron with lightweight recycled glass aggregate in place of pavement, diverting over 80 million glass bottles from landfills.

Philadelphia was one of nine airports invited to participate in the White House Roundtable on Sustainable Aviation in 2021, and was recognized as a leader in sustainability with an Honorable Mention award at the Airports Going Green conference. 🌟



## Paul Devine-Bottone

NOMINATED BY

JOEY WHELIHAN

Dr. Bottone is an adolescent medicine fellow at the Children's Hospital of Philadelphia, and he has a particular interest in the interplay between our natural environment and health. He has educated others in healthcare on this topic and also had done research in this area. He is on the forefront of this work in Philadelphia and is a personal mentor to me.

He authored an opinion piece in the Philadelphia Inquirer titled "Congress can help Philly plant more trees" in which he shared a stark reality in which many of our patients may not share the same beautiful earth that we grew up with. He also argues that the constant environmental disasters have had an effect on the mental health of our teens. He urges Congress to plant more trees in our urban environments to have a positive impact on the health of teens. He is truly an inspiration as an aspirational figure to how pediatricians should be working to address the climate crisis.





# 2021 Successes and Looking Ahead

Philadelphia's Greenworks framework sets out eight long-term visions for a sustainable city for all. The Office of Sustainability and its partners across city government are doing their part to achieve each of those visions. Read on to learn more about recent successes across each of the eight visions and things to look forward to in 2022. *Please note: See acronym decoder on the following page.*



## ACCESSIBLE FOOD AND DRINKING WATER

### ★ PROGRESS

- **Signed Glasgow Food and Climate Declaration**—Philadelphia, a founding signatory, committed to tackling the climate emergency through food policies.
- **Strengthened Food Policy Design and Delivery**—The City made a significant shift in acknowledging and coordinating food policy by convening leadership on a strategic initiative to improve the efficiency and effectiveness of 50+ food-related programs across 30+ agencies. FPAC completed its strategic plan and provided recommendations to key actors who are a part of the new strategic initiative. (see more on page 42)
- **Supported Groups Fighting Food Injustice**—The Philadelphia Food Justice Initiative awarded \$370,000 to support community-driven solutions in areas where access to healthier food is needed the most.
- **Completed Urban Agriculture Plan**—PPR completed Philadelphia's first urban agriculture plan, *Growing from the Root*. (see more on page 48)
- **Updated Nutrition Standards**—PDPH revised the Philadelphia Nutrition Standards, which impact food and beverages purchased, served or sold by City funded-programs. This process included soliciting feedback from City departments, partners and constituents.
- **Launched Central Food Distribution Website**—OCF created [phila.gov/food](http://phila.gov/food), an online free food distribution map as part of the City's COVID-19 emergency response and ongoing food insecurity (see more on page 46)

- **Distributed food from PDP Orchard Program**—PDP partnered with Food Connect, a nonprofit organization, to distribute organically grown food from the PDP Orchard Program to local food pantries.
- **Increased water access in schools**—PDPH and the School District secured funding for additional appealing drinking water access in schools and used data to ensure greater equity in how the access was distributed.

### 🕒 UP NEXT

- **Continuing to work towards a just food system**—The City's leadership will continue convening around food policy and begin implementation of the Urban Agriculture Plan. The FPAC will develop a shared model for how individuals, organizations, and communities can advance food policy goals.
- **Publishing the Good Food Business Guide**—FPAC will publish its second guide to help consumers identify Philly businesses that are practicing 'good food' standards in the areas of service, people, and values.
- **Piloting a platform for meal delivery logistics**—SmartCityPHL is partnering with PDPH and Food Connect to develop a platform to support the logistics and distribution of meals to food-insecure Philadelphians. The platform will also support the City's commitment to contract with more small and local businesses, particularly those owned by traditionally disadvantaged groups. This is a first step towards creating a regional food ecosystem leveraging the City's procurement power.

## ACRONYMS—

Air Management Services (**AMS**)  
 Commercial Property-Assessed Clean Energy (**C-PACE**)  
 Delaware Valley Regional Planning Commission (**DVRPC**)  
 Delaware River Basin Commission (**DRBC**)  
 Environmental Protection Agency (**EPA**)  
 Federal Emergency Management Agency (**FEMA**)  
 Food Policy Advisory Council (**FPAC**)

Green Retrofit Immersive Training (**GRIT**)  
 Leadership in Energy and Environmental Design (**LEED**)  
 Light Emitting Diode (**LED**)  
 Mayor's Policy Office (**MPO**)  
 National Oceanic and Atmospheric Association (**NOAA**)  
 Office of Children and Families (**OCF**)  
 Office of Emergency Management (**OEM**)  
 Office of Sustainability (**OOS**)

Office of Transportation, Infrastructure, and Sustainability (**oTIS**)  
 Pennsylvania Department of Environmental Protection (**PADEP**)  
 Pennsylvania Department of Transportation (**PENNDOT**)  
 Pennsylvania Horticultural Society (**PHS**)  
 Philadelphia Corporation for Aging (**PCA**)  
 Philadelphia Department of Prisons (**PDP**)  
 Philadelphia Department of Public Health (**PDPH**)

Philadelphia Energy Authority (**PEA**)  
 Philadelphia Gas Works (**PGW**)  
 Philadelphia Northeast Airport (**PNE**)  
 Philadelphia Parks & Recreation (**PPR**)  
 Philadelphia Water Department (**PWD**)  
 Regional Greenhouse Gas Initiative (**RGGI**)  
 Request for Proposals (**RFP**)  
 School District of Philadelphia (**SDP**)  
 Southeastern Pennsylvania Transit Authority (**SEPTA**)



## HEALTHY OUTDOOR AND INDOOR AIR

### ★ PROGRESS

- **Purchased Electric School Buses**—SDP purchased five new electric school buses to help reduce diesel emissions with grants from the EPA's Diesel Emissions Reduction Act and PADEP's Driving PA Forward Initiative.
- **Received Funding to Reduce Diesel Emissions at the Port**—The EPA awarded \$1.3 million to the Philadelphia Regional Port Authority to reduce diesel emission by converting a crane from diesel to electric.
- **Launched Community Scale Air Toxics Monitoring Program**—AMS was awarded \$352,208 through EPA's Community Scale Air Toxics Monitoring program grant to assist in assessing the degree and extent to which air toxics from various sources, including the site of the former refinery, impact the immediate community in South Philadelphia.
- **Experienced Fewer Poor Air Quality Days**—According to the Air Quality Index there were 222 good days (60.8%), 132 moderate days (36.2%), and 11 unhealthy days (3%) in 2011.
- **Released Municipal Clean Fleet Plan**—The City released the Municipal Clean Fleet Plan, a strategy to convert the City's 6,000 vehicles to clean and electric vehicles. (See Page 6 for more)
- **Made Infrastructure Improvements to Support Electric Vehicles**—Streets completed installation of charging electric vehicle charging stations at Sanitation Depots.

### 🕒 UP NEXT

- **Launching New Mobile Monitoring Unit**—In April of 2020, AMS will begin using a new mobile monitoring unit to measure more than ten important toxics and criteria pollutants. AMS plans to deploy the mobile unit in neighborhoods that have historically experienced disproportionate exposure to air pollution.
- **Implementing Municipal Clean Fleet Plan**—SmartCityPHL and oTIS will assemble a working group to define a pilot project area and issue a request for proposals for electric vehicle charging infrastructure.
- **Seeking Federal Funding**—AMS will pursue additional federal funding opportunities to expand on local air monitoring.
- **Joining Regional Greenhouse Gas Initiative (RGGI)**—Pennsylvania is poised to join RGGI in 2022, joining 11 other east coast states in an initiative to reduce carbon emissions from the power sector and helping to drive investments in clean energy projects.



## CLEAN AND EFFICIENT ENERGY

### ★ PROGRESS

- **Updated City LEED requirement for Municipal Buildings**—City Council passed legislation updating the City's LEED requirement for new or renovated City buildings, increasing the ambition to LEED Gold to ensure buildings are energy efficient in design - LEED training for staff has begun.
- **Improved Citywide Buildings EnergyStar Score**—Data collected through the City's benchmarking program showed that in 2020, 2,375 buildings reported their water and energy data and helped the city improve its median Energy Star score to 61, up from 55 in 2019.
- **Completed African American Museum Energy Project**—OOS's Energy Office supported energy improvements at the African American Museum resulting in \$7,000 a year in savings and improving visitor experience.
- **Released PGW Business Diversification Study**—The City released the Business Diversification Study to explore options for PGW to retain their workforce and provide necessary services in a low-carbon future (See page 26 for more).
- **Met Green Design Certification for Municipal Building**—The renovation of Police District 2 achieved LEED Gold Certification.
- **Expanded Low-Cost Solarize Option**—PEA expanded Solarize Philly both through its Solar Savings Grant Program - which supported 50 solar installations in low- and moderate-income households - and by increasing its residential offerings - including a low-cost lease option that requires no minimum credit score or minimum income - to ensure that all Philadelphia homeowners can go solar.
- **Supported Commercial Energy Projects**—PEA closed \$50 million in C-PACE financing for energy efficiency, water conservation, and clean energy projects in commercial office buildings, mixed use buildings, healthcare, and industrial facilities.

### 🕒 UP NEXT

- **Continuing LED Streetlighting Project**—The City will finalize a contract with a vendor to begin the process of converting the City's streetlights to energy-saving LEDs.
- **Managing Compliance for Building Energy Performance Program**—The first compliance period for the Building Energy Performance Program will occur in September of 2022 for over 900 buildings throughout the city.
- **Joining Building Performance Standards Coalition**—The City will participate in the White House Council on Environmental Quality's Building Performance Standards Coalition.
- **Installing Solar at Northeast Airport**—The process of installing a 1.5 megawatt solar facility will begin at the Philadelphia Northeast Airport.
- **Launching Built to Last**—PEA's Built to Last program will serve 50 homes by the end of 2022, improving the long-term affordability and quality of Philadelphia's housing, helping families avoid displacement, reducing energy burdens, improving health outcomes, and supporting climate resilience.





## CLIMATE PREPARED AND CARBON NEUTRAL

### ★ PROGRESS

- **Received an “A” from CDP**—The City received an “A” for our climate action work from CDP, a non-profit that runs a climate disclosure system.
- **Convened Climate Resilience Research Agenda**—The City, in partnership with Drexel University, DVRPC, and others launched a working group to develop- with public input- a set of strategic research activities that could inform development of regional adaptation and resilience priorities.
- **Updated Hazard Mitigation Plan**—OEM released an update to the City’s Hazard Mitigation Plan, which describes what risks may impact Philadelphia and outlines ways to reduce damage from hazards before they happen
- **Required Climate Resilience in PWD Projects**—PWD now requires that the Department’s Climate-Resilient Planning & Design Guidance be used in the planning, design, and construction of all PWD projects to ensure infrastructure investments remain operationally and economically viable, despite the impacts of climate change.
- **Facilitated Forum on Sea Level Rise**—PWD worked with EcoAdapt to organize and facilitate a two-day virtual forum with over sixty leaders from coastal cities regarding sea level rise adaptation through the Water Utility Climate Alliance.
- **Joined DRBC Advisory Committee on Climate Change**—PWD became a member of the DRBC Advisory Committee on Climate Change which is tasked with supporting DRBC’s and the basin community’s efforts to identify and prioritize climate-related threats and vulnerabilities and provide recommendations for adapting and improving resiliency.
- **Responded to Two Heat Health Emergencies**—Over 2,500 residents used City cooling centers and buses, and over 190 people were assisted by the PCA Heatline phone service. This was the second year using buses to

expand resources to high-risk neighborhoods without existing cooling centers. PDPH notified community and faith-based partners of upcoming heat events to distribute real-time information regarding available cooling resources, tips on how to stay cool, and the signs of heat-related illness.

### 🕒 UP NEXT

- **Launching The Lower South Infrastructure Resiliency Roadmap**—The City will meet with major landowners and developers along the lower south Schuylkill on a monthly basis to discuss how to address infrastructure investments in the face of ever-increasing climate change with an eye towards accessing new federal infrastructure funding.
- **Completing Facility Risk Assessment**—PWD is working to complete its first facility-based risk assessment focused to identify critical assets that are vulnerable to inundation from sea level rise and storm surge and to make recommendations to reduce risks through effective adaptation strategies. To support future facility-based risk assessments, PWD applied for funding through FEMA’s Building Resilient Infrastructure and Communities program and the Hazard Mitigation Grant Program.
- **Completing Compound Flooding Model**—PWD, the Stevens Institute, and Drexel University will complete a NOAA-funded project to model compound flooding impacts in Eastwick. Sea level rise and precipitation projections under climate change will be used to identify and evaluate potential flood adaptation strategies.
- **Providing Grants to Community Resilience Projects**—OOS is collaborating with the Environmental Justice Advisory Commission to launch a community resilience grant program to provide resources to communities experiencing historical and current environmental injustice to advance their vision of an equitable and resilient future.



## QUALITY NATURAL RESOURCES

### ★ PROGRESS

- **Utilized Urban Wood**—PPR issued an RFP to solicit an operator to run a lumber yard at the Fairmount Park Organics Recycling Center and launched an Urban Wood Design Competition to salvage and integrate urban wood into PPR and Rebuild initiatives.
- **Distributed Trees**—PPR's TreePhilly program safely distributed 1,895 trees for home planting in yards across the city, holding 31 tree pickup events with an extensive network of community partners and offering door-to-door home delivery for vulnerable residents and those without access to a vehicle.
- **Updated Tree Inventory**—PPR completed an inventory of street and park trees, including location, species, and trunk diameter, which is accessible to the public on OpenDataPhilly. The inventory was a crucial first step for PPR's Urban Forestry unit to transition management of all public trees to their new GIS-based asset management system, Cityworks.
- **Expanded Green Stormwater Infrastructure**—PWD added 342 greened acres through public and private projects, resulting in over 2200 greened acres since the start of the Green City, Clean Waters program.
- **Created Meadow Habitat**—PPR partnered with the Fairmount Park Conservancy to transform five acres of turf grass into beneficial meadow habitat in West Fairmount Park.
- **Rebuild Philadelphia blasts off in 2021**—At the end of 2021 Rebuild had completed nine full projects, had 23 sites receive interim improvements to ensure they stay open and available for Philadelphians, another ten under construction, and over 40 in Rebuild's unique community engagement and design process, a total investment of over \$227 million in parks, recreation centers and libraries.

### 🕒 UP NEXT

- **Implementing Philly Tree Plan**—PPR and partners will implement the recommendations of the Philly Tree Plan, including ramping up maintenance of public trees and communication with residents, targeted tree planting in communities that are most in need of new tree canopy, and restoration and maintenance of our forested natural areas.
- **Restoring Forested Parkland**—PPR will be working to restore and preserve 15 acres of forested parkland and planting an additional 7,500 native trees and shrubs across Philadelphia's forests and wetlands in 2022.
- **Exploring How to Form a Conservation District**—OOS and PPR will begin to conduct a study on the current conditions and needs of agriculture and stewardship communities and City agencies to explore the creation of Conservation District.
- **Hosting Greater, Greener Conference**—Philadelphia will host the 2022 Greater & Greener conference, exploring how urban parks can be designed, developed, programmed, funded, and sustained to meet the challenges facing 21st-century cities.





## TRANSPORTATION

### ★ PROGRESS

- **Expanded Indego BikeShare**—In 2021, an additional 27 new Indego stations were installed throughout West Philadelphia, Point Breeze, Grays Ferry, Mifflin Square, and Lower Moyamensing.
- **Installed Bus-Only Lanes**—In September 2021, the City and SEPTA completed installation of bus only lanes on Market Street (20th to 15th) and JFK Boulevard (15th to 19th) in Center City to speed up bus service on the busiest streets for transit in the City and make service more reliable.
- **Issued RFI for EV Charging Infrastructure**—The City issued a Request for Information regarding electric vehicle charging infrastructure in October 2021. Twelve responses were received in November and will inform City policies, future actions, and potential contracting opportunities.
- **Launched Safe Routes Philly**—The City launched Safe Routes Philly (SRP) in April, bringing high quality transportation safety education materials to educators, students, and families across Philadelphia. In 2021, The SRP team managed the production of new curriculum and out of school time resources, three pedestrian and bicycle safety education videos, and translated SRP materials into six languages.
- **Installed New Bus Shelters**—In 2021, 79 new bus shelters were installed throughout the city.
- **Issued RFP for Smart Loading Zone pilot**—OTIS issued an RFP to test technologies that would allow the City to digitally map the curb space

### 🕒 UP NEXT

- **Continuing Indego Expansion**—oTIS plans to continue the expansion of Indego with 40 new stations and 400 additional bikes in areas such as Lehigh Avenue, along Kelly Drive to East Falls, Oregon Ave, Bartram's Garden and 54th Street.
- **Advancing Broad, Germantown and Erie Redesign**—The City, in partnership with community organizations, SEPTA, PennDOT, and elected officials will continue to advance the redesign of the Broad, Germantown, and Erie intersection in North Philadelphia to improve safety, transit facilities, and public space in the intersection. Construction is anticipated to begin in 2023.
- **Installing New Protected Bike Lanes**—More than 10 miles of new protected bike lanes are slated to be installed in 2022.
- **Tracking Federal Funding Opportunities**—The City will explore new funding opportunities available through the federal Infrastructure Investment and Jobs act.
- **Piloting Real-Time Transit Information**—oTIS and SEPTA will pilot new real-time information kiosks for transit riders in 2022.
- **Installing New Bus Shelters**—Up to 45 new bus shelters are slated to be installed and oTIS plans to pilot a new micro-shelter for transit riders in 2022.



## WASTE

### ★ PROGRESS

- **Cleaned Litter From Waterways**—PWD removed 616 tons of litter and debris through its Waterways Restoration Team.
- **Supported Tire Collection Efforts**—The Tire Roundup Program run by the Streets Department provided 50 cents per tire collected by eligible community organizations.
- **Exceeded Flower Show Waste Diversion Goal**—PHS achieved an overall waste recovery rate of 83.1% during its first-ever outdoor Flower Show at FDR Park thanks to strong partnerships and volunteers
- **Began Single Use Plastic Bag Ban**—The City began education and outreach efforts in July leading up to the October 1st start date for the ban on retailers providing single use plastic bags to customers (see page 8 for more)
- **Started Compost Program in Recreation Centers**—PPR launched a program to collect food waste from 25 recreation centers to be composted at a new site run by Bennett Compost on City-owned land, with a goal to add collections from additional centers each year.
- **Engaged Food Businesses to Reduce Waste**—OOS recruited a cohort of 10 businesses to join the Food Waste Business Challenge (See page 28 for more information)
- **Piloted On-Demand Recycling**—SmartCityPHL launched a pilot with Retrievr, an on-demand textile and e-waste recycling company which diverted over 202,892 pounds of waste from the landfill. The partnership also collected 930 used computers that were refurbished and provided free of cost to community members for the PHLDDonateTech program.
- **Adapted an Urban Mining Tool**—SmartCityPHL partnered with Metabolic to adapt an Urban Mining tool to Philadelphia that can determine and anticipate construction and demolition (C&D) waste numbers and composition to support the creation of a C&D reuse market.

- **Won Award for Food Recovery**—The EPA recognized PDP as a national awardee in the Government and Tribal category of its Food Recovery Challenge for diverting more than 555,000 pounds of wasted food to compost, which saved the city approximately \$19,000 in landfill fees. The composted material was donated to community gardens and church groups, as well as returned to grounds for use in PDP's orchard and greenhouses.
- **Piloted Tailored Recycling Messaging**—Through a \$250,000 grant from The Recycling Partnership, a national non-profit organization advocating innovative recycling strategies, Streets completed a pilot demonstrating the value of varied and tailored educational messages that will be incorporated into their long-term citywide recycling educational and communication strategies.

### 🕒 UP NEXT

- **Educating the public about food waste**—The City will launch an awareness campaign focusing on household food waste on Earth Day of this year. The Campaign will be displayed year-round and share simple actions that Philadelphians can take to reduce the amount of food waste created at home, impacting their communities and the environment.
- **Creating a Roadmap for a Circular Economy**—SmartCityPHL and other City partners will participate in a working group to create a Circular Economy Roadmap for Philadelphia that will look at leveraging local opportunities to create a more sustainable and resilient economy.





## ENGAGEMENT

### ★ PROGRESS

- **Recruited Environmental Justice Advisory Commission**—OOS led the recruitment and onboarding process for the City's first Environmental Justice Advisory Commission
- **Launched Community Resource Corps**—The City launched a new Community Resource Corps to help connect residents with resources, conduct neighborhood outreach and build the City's capacity for community engagement
- **Supported Sustainable Businesses**—For tax year 2020, \$42,129 was granted to 26 businesses as a tax credit through the Sustainable Business tax credit, with an average of \$2,217 credited.
- **Trained PowerCorpsPHL Members for Green Jobs**—PowerCorpsPHL served 115 members, of which 97% were people of color and 29% were women. Members planted over 1,150 trees, restored 2,531 trees, and removed 41 tons of organic debris and 44 tons of trash. 69% of program graduates entering employment went into jobs in environmental and water utilities sectors.
- **Launched Green Bank**—PEA launched the Philadelphia Green Capital Corp., one of the only municipal green banks in the country, to scale up equitable clean energy financing options for Philadelphia's homes and businesses.
- **Prepared Workforce for Clean Energy Careers**—PEA's workforce development programs- including the Green Retrofit Immersive Training (GRIT) and Bright Solar Futures- are helping create a well-trained, diverse and local workforce to meet the growing demand for clean energy and home improvement, graduating 35 students in 2021 and boasting a more than 50% job placement rate.

- **Initiated Citywide Community-Based Litter and Beautification Task Force**—Representing a broad range of communities, Streets created a Neighborhood Litter & Beautification Task Force to collaborate with the City to create and enact tailored Neighborhood Beautification Action Plans.

### 🕒 UP NEXT

- **Launching a Civilian Climate Corps**—The William Penn Foundation is supporting several organizations to create a Civilian Climate Corps for the Delaware River to create family-sustaining careers for underemployed and marginalized members of society while also addressing pressing climate and conservation needs.
- **Continuing to Prepare Youth for Energy Jobs**—In 2022, PEA will recruit and train another cohort of 15 participants for GRIT, preparing graduates to fill the jobs created through the Built to Last Program. PEA's third BSF Opportunity Youth cohort kicked off in January 2022, and in collaboration with the School District of Philadelphia and other key partners, PEA will recruit for the Fall 2022 class of BSF students at Frankford High School.



# THE PATH TO ENVIRONMENTAL JUSTICE

Environmental justice is a grassroots movement that first gained momentum in the 1980s. Led by Black, Indigenous, and people of color (BIPOC) communities, the movement called for economic and racial justice, the right for community self-determination, and for the inclusion of environmental stewardship in decision-making.

According to the Environmental Protection Agency, environmental justice is “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.” This definition identifies that environmental injustice often occurs when intentional or unintentional barriers prohibit communities from being involved in environmental decision-making processes. Though, environmental justice will not be achieved until everyone has equal access to a healthy environment, and the inequities that shape how people grow, live, learn, work, and age are addressed. That’s why broader environmental justice activism elevates economic justice and just transition in addition to reducing toxins and greenhouse gases and increasing health-promoting amenities.

In Philadelphia, systemic racism demonstrated through practices such as redlining, Urban Renewal (see more about Urban Renewal in Eastwick sidebar) and neighborhood disinvestment created lasting and harmful consequences in the lives of people of color. Black, Brown, and lower-wealth neighborhoods are most likely to be near industrial areas and experience high rates of pollution. Those same areas are less likely to have green spaces like parks and gardens. These realities contribute to why people of color experience inequality in their ability to live a healthy life and pursue their wellbeing.

Frontline communities – those impacted first and worst by generations of environmental degradation – have been organizing and advocating for decades in Philadelphia for their right to clean land, air, and water for all. While many environmental and sustainability organizations and leaders have been late to acknowledge and address environmental justice, these individuals and communities throughout Philadelphia have been doing the work of advancing urban agriculture and food sovereignty, checking on neighbors

during heat waves, organizing around air quality, zoning, development, a green economy, and much more. The environmental and sustainability movements would not be what they are today without the perseverance of these communities or have nearly the same potential for the future without their leadership.

## LOOKING BACK TO MOVE AHEAD

The accelerating climate crisis heightens the urgency of the struggle for environmental justice. Inequalities like higher pollution burdens, lower-income levels, and limited healthcare access compound and place communities experiencing environmental injustice at greater risk and vulnerability to climate change impacts. Communities that have been economically marginalized and with less access political influence face significant challenges preparing for, enduring, and recovering from the effects of the climate crisis, such as flooded homes, disrupted economies, and extreme heatwaves. Research in communities with significant damage from natural disasters found that white families increased their wealth through generous reinvestment initiatives. Meanwhile, BIPOC families in communities with similar damage from natural disasters saw a decrease in wealth.

Inequitable disaster recovery is only one aspect of systemic racism intersecting with the climate crisis. If left unchecked, discriminatory practices from the past will re-emerge under a different cover. Banks and mortgage lenders are beginning to draw lines around neighborhoods based on risks of flooding or other climate-related disasters, a process referred to as blue-lining. The increased likelihood of the climate crisis worsening historic and ongoing injustice in the city is what led Mayor Kenney to commit to making climate adaptation and resiliency a key priority of his second term.







# ENVIRONMENTAL JUSTICE ADVISORY COMMISSION

In 2018, City Council of Philadelphia passed legislation sponsored by then Councilmember Blondell Reynolds Brown to create an Environmental Justice Advisory Commission. The goal of the legislation was to have a Commission to provide recommendations to the Mayor, City Council, and City agencies to study, report on, and address environmental justice issues in Philadelphia. The legislation was subsequently amended to provide compensation for Commission members to help make it possible for more residents to participate equitably as advisors.

After the passage of the legislation, the Office of Sustainability organized a working group of advisors with direct experience with environmental justice to help outline

a framework for the establishment of the Commission and recruitment and application process.

In November of 2021, the Office of Sustainability opened applications for residents to serve on the Commission. The focus was on recruiting residents who live near the following: industrial or transportation sites that emit high levels of air, water, and land pollution; in buildings with environmental toxins such as lead, mold, and asbestos; in neighborhoods that have few to no safe and trash-free outdoor spaces, both land and water; or in neighborhoods experiencing climate change impacts like high heat with no shade from trees, or flooding.

**In all, 140 residents applied and 17 were selected to serve. (See profiles on page 23)**



## WHAT IS REDLINING?

During the first half of the 20th century, local and federal governments prevented African Americans and other minority populations from homeownership through the creation of discriminatory federal mortgage programs and redlined appraisal maps, as well as the use of racial covenants written into deeds that prohibited certain races from the ownership of specific properties. These policies, which exclusively provided white populations with the access to capital and privilege necessary for homeownership, had a significant role in the racial segregation of American cities.

SOURCE: <https://controller.phila.gov/philadelphia-audits/mapping-the-legacy-of-structural-racism-in-philadelphia/>

## GOV. WOLF AND PA LEGISLATIVE BLACK CAUCUS TACKLE ENVIRONMENTAL JUSTICE

In October, Governor Tom Wolf and members of the Pennsylvania Legislative Black Caucus came together to announce several actions to address environmental justice issues in the Commonwealth. Gov. Wolf announced an executive order to permanently establish the Office of Environmental Justice within the Department of Environmental Protection (DEP), to establish an Environmental Justice Advisory

Board, and to create an Environmental Justice Interagency Council. The Black Caucus announced four bills- three that would codify the Governor's executive order actions, and an additional bill that, if passed, would create a more transparent process for permit approvals for facilities near communities that would be designated as environmental justice communities.



# ABOUT THE COVER

The Climate Justice Initiative Mural featured on the cover is the result of many months of research, collaboration, conversation, and spirited debate among collaborators in the Climate Justice Initiative (CJI), a project of Mural Arts' Environmental Justice Department. CJI collaborators are organizers, activists, artists and leaders in communities on the front-lines of environmental justice, working to create a more just future. Environmental hazards affect marginalized communities, especially communities of color, the most. For this reason, Mural Arts' Environmental Justice Department projects are rooted in front-line communities, centering their knowledge, expertise, and vision. The project also prioritizes uplifting indigenous voices.

The process of the mural's creation is just as important as the mural itself! CJI aspires to model the principles of a more just future in every aspect of its work, including the design and feedback process.

THE LAND CIRCLE OF THE CLIMATE JUSTICE INITIATIVE WILL BE HOSTING A MONTH OF EVENTS JUNE 2022 IN PARTNERSHIP WITH CESAR ANDREU IGLESIAS GARDEN AT 425 ARLINGTON STREET, PHILA 19122. LOOK FOR EVENTS SPRING THROUGH FALL 2022.



TO LEARN MORE ABOUT CJI, VISIT [CLIMATEJUSTICEINITIATIVE.COM](https://climatejusticeinitiative.com)

**Collaborators convened in circles to share their first-hand knowledge and drive the design of the mural:**

## LAND CIRCLE



Since 1492, the systems of colonization, extractive industry, and industrial agriculture have led to displacement, dispossession, and climate catastrophe. CJI's Land Circle collaborators are providing spaces for Black and Indigenous community members to reconnect with the land, tending it for food, healing, and justice.

## AIR CIRCLE



Incinerators, refineries, and fossil fuel power plants all release pollution that leads to severe health hazards, air and water contamination, and climate change. CJI's Air Circle collaborators are standing up for the right to breathe clean air, especially in poor and working-class communities of color.

## TRASH CIRCLE



Every step along the lifespan of a consumer product releases greenhouse gases, from extraction of raw materials, to processing and production, transportation, and finally disposal. CJI's Trash Circle collaborators are working towards a future of zero waste, in which the concept of trash no longer exists.

## ART CIRCLE

The Art Circle listens to collaborators' stories and designs images, colors, and themes to represent each collaborator's uniqueness, as well as the "big picture" that ties all of us together.

## STRATEGY CIRCLE

The Strategy Circle coordinates with all other circles of the project, ensuring that we are working towards the project goals. The Strategy Circle creates, shares, and upholds the project goals and principles to all collaborators.



# EASTWICK: FLOODED & FORGOTTEN OR REMEMBERED & RESILIENT?

Transformed by the Urban Renewal era of the mid-20th century, Eastwick, a predominantly Black neighborhood, is an egregious example of environmental injustice. Urban Renewal was a federally funded nationwide policy intended to clear out “blighted” areas of the inner city and to build new housing and amenities. “Blight” designations were biased by racial and ethnic prejudice, as research has shown that this designation was more readily applied to neighborhoods home to non-white groups and low-wealth people. The racist sentiments that embodied “blight” designations mirrored other contemporary policies, such as redlining, that were creating barriers to occupying and owning land as well as limiting access to transportation, employment, and quality health care.

Through eminent domain, Urban Renewal forcibly displaced many early Eastwick residents and aggravated and expanded the neighborhood’s environmental risk. While the community was always vulnerable to flooding due to their location, Urban Renewal added to this vulnerability by constructing housing over soil containing elevated levels of hazardous substances such as lead, mercury, pesticides, and arsenic.

This turn of events had significant public health implications. Episodes of flooding were now accompanied by exposure to toxins, in addition to the damage to property and infrastructure.

Eastwick’s sinking homes and catastrophic flooding collide with another set of persistent Eastwick problems: polluting facilities. The two federally-designated Superfund sites in the area—the Folcroft and Clearview Landfills - present the most significant concern for pollution. A U.S. Environmental Protection Agency investigation concluded that contaminants from those sites posed unacceptable risks to human health.

Today, frontline community organizations such as Eastwick Friends and Neighbors and Eastwick United Community Development Association are fighting for solutions to help ensure the long-term health and viability of their community. Ms. Carolyn Moseley is one such neighbor who has been supporting neighbors during and after storm events and advocating for programs and policies to help prevent future disasters. This interview has been edited for length and clarity:



*Continued on next page.*

*Continued from previous page.*

### **Tell me about yourself and your background:**

I've lived in Eastwick for 24 years. I'm retired from the City's Office of Housing and Community Development, and before that worked as a Senior Development Specialist at the Philadelphia Housing Development Corporation so I have a lot of knowledge and awareness of resources that are available for my community.

### **What do you love about the Eastwick community?**

I love the environment of Eastwick and the open space like the Heinz National Wildlife Refuge where I can walk. It feels safe in the community, it is clean and well-cared for. It's truly a community in every sense of the word with neighbors looking after each other. I also love that it is close to Delaware County where I have family I can visit and to the airport since I love to travel.

### **I know that Eastwick has faced many challenges with flooding. Can you share what those experiences are like?**

I have personally only experienced a little bit of flooding in my home during Hurricane Floyd in 1999. I live on the higher end of the community, but my backyard drainage was not designed to take out a lot of water during a large storm, so I got water in my home from the backyard.

However, I can share a lot of stories from other residents, particularly those that live on the "planet streets". There is an elderly couple who was confined to living on the first floor of their home due to mobility issues. They had paid off their home and assumed they could retire and live safely there. However, during Tropical Storm Isais they could not get upstairs when their home flooded. By the time they were rescued, they were sitting on the steps with water up to their necks waiting for the inevitable. Another family has a 5-year-old that has trauma from past flooding events, and every time it rains he is afraid he's going to be taken away from his family.

There is real trauma in the community. There is loss, from homes to smaller ones like the loss of the only picture of a deceased parent, which cannot be replaced. This loss is coupled with not receiving help. Tropical Storm Isais happened in the middle of the pandemic when folks were already hurting. There was no declaration of disaster, no money from FEMA or the City, only a referral to homeless shelters. And some residents have been left homeless or displaced. I know a young man who is commuting to his job from Virginia because his home is gone. Some homes that were damaged have now been fixed up and rented again without the new residents being aware of the risks.

### **How is the community responding to the flooding from Tropical Storm Isais?**

Some of the Eastwick leadership has been meeting with Voluntary Organizations Active in Disaster (VOAD) groups every Friday since September of 2020 to raise money and to enlist volunteer contractors to fix up the damaged homes. We are taxpayers,

residents, and voters- we demanded that our city leadership step up to the plate and help these people. Councilmember Kenyatta Johnson pulled together a meeting and got various city departments to attend. But some residents didn't have heat or had active mold growing. The City has come through with an additional \$100,000 to help address more residents who have ongoing issues. The funds will be useful in helping impacted residents and empowering them to get the help they need.

We've also been working with Health and Human Services to provide trauma counseling for residents to deal with the emotional impact after the storm subsides. There are local therapists in Eastwick that are stepping up to help. So we are building our own resources up so we are ready for the next event. We do not want to wait for when another disaster comes. We want to be ready to spring into action to help residents—they deserve that much.

### **You recently joined the City's new Environmental Justice Advisory Commission. What does environmental justice mean for Eastwick?**

Eastwick checks just about every environmental injustice there is—we are flown over, flooded, and forgotten. But we are trying to be remembered! Besides the flooding issue, Eastwick is in close proximity to heavily traveled roads- like I-95 and 76. We have homes that are sinking that were built on silt- even though it was against City code at the time. There are visible structural cracks in walls, driveways with a 3 foot drop and windows that have become so misaligned they can't open or close. Now there is a large post office with heavy truck traffic and a new Amazon facility is coming that will increase truck use even more. I'm concerned the vibrations from the trucking will pull those sinking houses down. We'd like for Amazon to be a good employer by paying real living wages to workers, and to be a good neighbor and help us to create programs for young people. Greening is critical and having trees and open spaces to promote mental and physical well-being, so we want to protect the green space we have.

### **What do you hope the EJAC will do?**

I hope the EJAC can educate the City leadership and residents about environmental justice, and to address the barriers to achieving environmental justice for the entire city. This city is majority African American and that is also who is being most impacted. We need to look at policy. We need to have difficult but necessary conversations so we can take the next steps towards achieving environmental justice. Eastwick's past is a big part of how we got here today with Urban Renewal that displaced people. That's the history of many communities of color- land taken through eminent domain or other outrageous racial actions. But if they can build the Hoover Dam or the Panama Canal, why is flooding in Eastwick so difficult to resolve? I hope this commission can help push the City in the right direction. It needs to happen. 🌟



## MEET THE MEMBERS OF THE ENVIRONMENTAL JUSTICE ADVISORY COMMISSION



### SYREETA THOMAS

As a science educator in the community that I grew up in (Strawberry Mansion) I witnessed firsthand the lack of environmental education. I believe one of the biggest reasons for the disparities in environmental justice is the lack of education. Being diagnosed with asthma as an adult and having three children plagued with asthma as well had me look further into the causes. While the causes cannot be directly linked to the fact that trees have been removed from nearby streets or certain areas of the city being an average of ten degrees hotter than others, I am certain it doesn't help.

I have watched my neighborhood change over the years as many of my friends and school mates grew up. I have been a victim of the redlining practices that kept myself and many of my neighbors from maintaining our homes. I am a strong advocate for the rights of seniors as I cared for my grandmother and helped her navigate a web of services. As a mother, teacher, homeowner, lifelong resident of Philadelphia, and advocate for the preservation of our planet for future generations, I feel my voice is representative of many facets of Philadelphia residents that should be heard.



### EBONY GRIFFIN

I decided to join the commission in order to bring a voice and representation to the minority communities I serve, especially the Hispanic community. These communities do not only tend to be underrepresented, but are also the ones that are impacted the most by the effects of climate change and the environmental injustices we seek to reverse. I am here as a bridge, as the eyes, ears, and mouth of those who would otherwise not have a voice.



### GABRIELLA PAEZ

I decided to join the commission in order to bring a voice and representation to the minority communities I serve, especially the Hispanic community. These communities do not only tend to be underrepresented, but are also the ones that are impacted the most by the effects of climate change and the environmental injustices we seek to reverse. I am here as a bridge, as the eyes, ears, and mouth of those who would otherwise not have a voice.



### JEROME SHABAZZ

Dr. Martin Luther King's quote says it best for me, "Injustice anywhere is a threat to justice everywhere". Justice, particularly as it relates to the environment, represents a pathway for dignity of a people. I believe, Environmental Justice intentionally prohibits the burdensome impacts of process, policy or law that denies our most vulnerable—healthy access to air, water, land, and food, regardless of where they live, work or play.



### ALL MEMBERS

JOHN A. ARMSTEAD  
NAHDIR AUSTIN  
RADIKA BHASKAR  
PAUL DEVINE BOTTONE  
CARLOS CLAUSSELL  
MARIEL DIANA FEATHERSTONE  
EBONY GRIFFIN\*  
TERRILL HAIGLER  
JOYCE LEE  
SU LY  
CAROLYN MOSELEY (see interview on page 21)  
KERMIT O  
GABRIELLA GABRIEL PAEZ\*  
TYLER RAY  
KINTESHIA SCOTT  
JEROME SHABAZZ\*  
SYREETA THOMAS\*





## FREE RESOURCES

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From fun, to cleaning and greening—Philadelphians have access to many free resources. Check out our guide to learn more.

### → AIR QUALITY

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**AIR QUALITY WEBSITE** Track Philadelphia's daily air quality to protect your health. [bit.ly/PHLair](https://bit.ly/PHLair)

**AIR QUALITY NOTIFICATIONS** Sign up to receive an email when an Air Quality Action Day is declared, or view air quality forecasts. [bit.ly/AQnotification](https://bit.ly/AQnotification)

**AIR MANAGEMENT SERVICES** Report issues such as idling, dust, or unusual odor. Call 215-685-7580 (business hours) or 215-686-4516.

**LEAD AND HEALTHY HOMES PROGRAM** Find resources to ensure a home that is free from lead and other hazards. (215) 685-2788. [bit.ly/PHLhealthyhomes](https://bit.ly/PHLhealthyhomes)

**SMOKE DETECTOR** Request a free smoke detector and installation through Philly311. Call 311 or visit the 311 Walk-in Center in Room 167 of City Hall. [bit.ly/SmokeAlarmPHL](https://bit.ly/SmokeAlarmPHL)

### → COMMUNITY RESOURCES

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**REGISTERED COMMUNITY ORGANIZATION (RCO)** Find information about proposed developments in your neighborhood. [bit.ly/RCOphilly](https://bit.ly/RCOphilly)

**ZONING BOARD OF ADJUSTMENT HEARING** Attend a virtual hearing to comment on any appeals decisions. [bit.ly/zoningappealsPHL](https://bit.ly/zoningappealsPHL)

**PHILADELPHIA ACTIVITIES FUND GRANT** Between March 1 – May 1, nonprofits can apply for \$500 - \$1,000 for things like supplies, materials, and other program costs. 215-683-8448, [pafgrant@phila.gov](mailto:pafgrant@phila.gov) [bit.ly/ActivityGrant](https://bit.ly/ActivityGrant)

**PHL CITY ID** The Philadelphia Municipal ID is available for free for seniors. It is accepted by all City services and City-funded programs. Call 311 or visit the 311 walk-in center in Room 167 of City Hall. [bit.ly/PhillyID](https://bit.ly/PhillyID)

**PCA HELPLINE** Philadelphia Corporation for Aging connects seniors to services and resources. 215-765-9040 or TDD 215-765-9041. [bit.ly/PCAHelp](https://bit.ly/PCAHelp)

**CENTRAL SENIOR SERVICES** The Parkway Central Library helps elders maintain healthy and active lifestyles by providing programs like estate planning, Medicare filing, book clubs, and more. 215-686-5331. [bit.ly/LibrarySeniorService](https://bit.ly/LibrarySeniorService)

### → EDUCATION AND ACCESS

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**FREE LIBRARY OF PHILADELPHIA** 215-686-5322  
**LIBRARY CARD** People that live, work, pay taxes, or go to school in Philadelphia can get free access to books, movies, music, and magazines. [bit.ly/LibraryCardPHL](https://bit.ly/LibraryCardPHL)

**EXPERIENCE PASS** Residents ages 18+ can get free access to local attractions like museums, historical sites, gardens, and more. [bit.ly/ExperiencePassPHL](https://bit.ly/ExperiencePassPHL)

**CLASSES** The Free Libraries offer resources for English Language Learning (ELL), college prep, business, early literacy, cooking, sign language, and more. [bit.ly/LibraryProgramsPHL](https://bit.ly/LibraryProgramsPHL)

**CITIZENS PLANNING INSTITUTE** Participate in the course to learn more about land-use decision-making. [CPI@phila.gov](mailto:CPI@phila.gov), 215-683-4640. [citizensplanninginstitute.org](https://citizensplanninginstitute.org)

**CIVIC ENGAGEMENT LEARNING SERIES** Participate in monthly workshops. [bit.ly/CivicWorkshops](https://bit.ly/CivicWorkshops)

**PHILLY KEYSPOOT** Fifty free neighborhood computer labs located all over the city. Find a KEYSPOOT near you to browse the internet and get access to computer skills and job training. 215-686-5250. [bit.ly/KEYSPOT](https://bit.ly/KEYSPOT)

### → EXTREME TEMPERATURES

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**COOLING CENTER MAP** On extreme heat days, find your local cooling center, pools, and spraygrounds. [bit.ly/PHLCool](https://bit.ly/PHLCool)

**COMMUNITY HEAT RELIEF TOOLKIT** Find ways to prepare your community for hotter summers. [bit.ly/BTHphl](https://bit.ly/BTHphl)

**COLD RED** During very hot weather a Code Red can be declared to protect people who are houseless. (215) 232-1984. [bit.ly/CodebluePhilly](https://bit.ly/CodebluePhilly)

**CODE BLUE** During very cold weather, a Code Blue can be declared to protect people who are houseless. (215) 232-1984. [bit.ly/CodeRedPhilly](https://bit.ly/CodeRedPhilly)

### → FLOODING AND STORMS

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**READYPHILADELPHIA** Receive text alerts to your phone on emergencies or severe weather, simply text ReadyPhila to 888-777. You can sign up for alerts through the mobile app, email, or voicemail. [bit.ly/ReadyPHL](https://bit.ly/ReadyPHL)

**BASEMENT PROTECTION PROGRAM** Protect your basement from flooding with the Philadelphia Water Department's help. (215) 685-6300. [bit.ly/BPPphl](https://bit.ly/BPPphl)

**RAINCHECK PROGRAM** Get a free rain barrel and discounts on other green stormwater infrastructure tools. [RainCheck@pennhort.org](mailto:RainCheck@pennhort.org), 215-988-8767. [bit.ly/RainCheckPHL](https://bit.ly/RainCheckPHL)

**SOAK IT UP ADOPTION GRANT** Community groups can get funding to implement, maintain, and share information about green stormwater infrastructure tools in their neighborhood. 215-683-3405. [bit.ly/GSIgrant](https://bit.ly/GSIgrant)

**FLOOD PREPAREDNESS WEBPAGE** Find information on flood preparedness. [bit.ly/FloodPHL](https://bit.ly/FloodPHL)

**RESILIENT COMMUNITY WORKSHEET** Plan for how to respond to a storm or other emergency event. [bit.ly/ResilientCommunityPHL](https://bit.ly/ResilientCommunityPHL)

### → GREEN SPACE

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**GROUNDING IN PHILLY** Find resources on working with your community and finding the right land to build a garden. [bit.ly/gardenPHL](https://bit.ly/gardenPHL)

Read the Growing Safely in Philadelphia report by the Philadelphia Food Advisory Council. <https://bit.ly/SafeGardenPHL>

**TREEPHILLY** Request a free yard or street tree, host a yard tree giveaway, and learn about the City's first-ever urban forest strategic planning process. 215.683.0217. [TreePhilly.org](http://TreePhilly.org)

**FIND A PARK OR ACTIVITY** Use the Parks & Recreation Finder to get involved in your local park. [bit.ly/ActivityFinderPHL](http://bit.ly/ActivityFinderPHL)

**FAIRMOUNT PARK CONSERVANCY** Use the Philly Parks map to explore historic sites, walking trails, picnic sites, and more. 215-988-9334 [info@myphillypark.org](mailto:info@myphillypark.org). [bit.ly/PhillyParksMap](http://bit.ly/PhillyParksMap)

#### **PARKS & RECREATION'S STREET TREE MANAGEMENT DIVISION**

**STREET TREE** Request a free street tree. 215-685-4363 [streettree.info@phila.gov](mailto:streettree.info@phila.gov). [bit.ly/StreetTreePHL](http://bit.ly/StreetTreePHL)

**STREET TREE MAINTENANCE** Request pruning and removal of dead and hazardous street trees and trees in neighborhood parks, recreation centers, and playgrounds owned by the City of Philadelphia. (215) 685-4362. [bit.ly/StreetTreeHelp](http://bit.ly/StreetTreeHelp)

### → **HOME MAINTENANCE AND UTILITY BILL ASSISTANCE**

**NEIGHBORHOOD ENERGY CENTERS** Local one-stop shop to apply for bill payment programs such as LIHEAP, and learn how to budget for water, gas, and electricity costs. 215-609-1000. [bit.ly/NeighborhoodEnergy](http://bit.ly/NeighborhoodEnergy)

**BASIC SYSTEMS REPAIR PROGRAM** Free repairs for electrical, plumbing, heating, structural, and roofing emergencies in eligible owner-occupied homes. 215-568-7190. [bit.ly/HomeBasicRepair](http://bit.ly/HomeBasicRepair)

**EMERGENCY HEATER REPAIR HOTLINE** Find out about emergency repairs to home heating systems. 215-568-7190. [bit.ly/EmergencyHeaterRepair](http://bit.ly/EmergencyHeaterRepair)

**PECO SMART IDEAS PROGRAM** Rebates, incentives, and programs to help cut energy waste. 1-888-5-PECOSAVE. [bit.ly/SmartIdeaPECO](http://bit.ly/SmartIdeaPECO)

**PGW ENERGYSENSE PROGRAM** Get support to improve energy efficiency and comfort in your home. 877-749-7658. [bit.ly/PGWEnergysense](http://bit.ly/PGWEnergysense)

**LIHEAP/CRISIS** Federal grants to help pay home heating bills for renters and owners. 1-866-857-7095. [bit.ly/LIHEAPhelp](http://bit.ly/LIHEAPhelp)

**UTILITY EMERGENCY SERVICES FUND (UESF)** Grants to help pay home electricity bills. 215.972.5170. <https://bit.ly/helpUESF>

**PECO CUSTOMER ASSISTANCE PROGRAM (CAP)** Get discounts on your monthly PECO bill. 1-800-774-7040. [bit.ly/PECOCAP](http://bit.ly/PECOCAP)

**CUSTOMER ASSISTANCE REFERRAL EVALUATION PROGRAM (CARES)** PGW provides payment assistance to residential customers with special circumstances like medical emergencies, unemployment, and other hardships. 215-235-1000. [bit.ly/PGWCustomerHelp](http://bit.ly/PGWCustomerHelp)

**CUSTOMER RESPONSIBILITY PROGRAM PGW** provides payment assistance to low-income residential customers. 215-235-1000. [bit.ly/PGWCustomerHelp](http://bit.ly/PGWCustomerHelp)

**WATER BILL CUSTOMER ASSISTANCE** Issues paying your water bill? All water assistance programs, including TAP, now use one application. 215-685-6300. [bit.ly/PWDCustomerHelp](http://bit.ly/PWDCustomerHelp)

### → **WASTE, LITTER, AND ILLEGAL DUMPING**

**PHILLY311** Report illegal dumping and unlicensed construction by calling 3-1-1 or visiting [phila.gov/311](http://phila.gov/311).

#### **COMMUNITY LIFE IMPROVEMENT PROGRAM (CLIP)**

**VACANT LOT PROGRAM** Residents can call 311 to request a vacant lot cleanup. <https://bit.ly/lotcleanup>

**COMMUNITY PARTNERSHIP PROGRAM** Community groups, businesses, homeowners, and renters can schedule trash pickup and borrow supplies for cleanups. [bit.ly/PHLCLANUP](http://bit.ly/PHLCLANUP)

**BECOME A BLOCK CAPTAIN** Help keep your neighborhood clean by organizing and electing a block captain. (215) 685-3971. [bit.ly/PHLblockcapt](http://bit.ly/PHLblockcapt)

**SANITATION CONVENIENCE CENTERS** Drop off items such as tires, appliances, e-waste, mattresses, or yard waste. <https://bit.ly/TrashdropoffPHL>

**LITTER INDEX** Learn about local litter conditions and find resources for cleaning and beautifying your neighborhood. [bit.ly/litterPHL](http://bit.ly/litterPHL)

#### **FAIRMOUNT PARK ORGANIC RECYCLING CENTER**

**PICKUP ORGANIC MATERIALS** Residents can get up to 30 gallons of free leaf compost, mulch, or woodchips, and landscapers, garden centers, and contractors can purchase and dispose of organic materials. 215-685-0108. [bit.ly/OrganicRecycling](http://bit.ly/OrganicRecycling)

### → **WATER QUALITY**

**WATER QUALITY TEST** Philadelphia Water Department customers can request free water quality testing, safety tips, and replacement options. 215-685-6300. [bit.ly/WaterTestPHL](http://bit.ly/WaterTestPHL)

**HOMEOWNER'S EMERGENCY LOAN PROGRAM (HELP)** Make sure your plumbing and water service lateral, the pipe that connects your house to the water main, are in a good, safe condition to ensure drinking water quality, and get help paying for repairs to water and sewer service pipes. (215) 685-4901. [bit.ly/HELPhl](http://bit.ly/HELPhl)

# Charting the Future for a Gas Utility

The City of Philadelphia is the owner of Philadelphia Gas Works (PGW), the largest municipally-owned gas utility in the country which employs over 1,600 workers living in Philadelphia and distributes natural gas to around 500,000 customers. This poses a complex question: How can PGW evolve to support Philadelphia's goal of achieving carbon neutrality by 2050?

The PGW Business Diversification Study was undertaken to explore options for how PGW could decarbonize while continuing to support good-paying jobs and protecting ratepayer affordability. The Study first defines and evaluates four pathways for PGW to decarbonize by 2050 including:

- Replacing fossil fuels with decarbonized gas.
- Replacing natural gas furnaces or boilers with a heat pump and electric appliances.
- Taking a hybrid approach in electrifying appliances and using decarbonized gas for back-up service.
- Creating a shared geothermal network. In all four pathways, energy efficiency measures play an important role.

Each of the pathways presents trade-offs between costs and feasibility that highlight the challenge of decarbonizing a gas utility, a challenge which has not been fully addressed elsewhere in the United States.

The Study also evaluated new business models that could provide PGW with additional sources of revenue that are consistent with the City's climate and rate affordability goals. Several of the new strategies were close to existing PGW services, such as weatherization or renewable natural gas supply services. Other strategies were a departure from their existing business model, such as strategic electrification, financing services, or a community solar developer. The analysis provides clear evidence that PGW's complex regulatory structure must be reformed in order to enable the utility to pursue any of the surveyed options.

To continue the work in finding alternative business models for the company, the City and PGW are actively investigating the design and implementation of pilot programs that PGW can launch, informed by the findings of this report. These pilot strategies include:

- A weatherization program with novel financing opportunities, where PGW and the City will work together to identify funding opportunities for a program to support low- and moderate-income customers in the upfront financing and implementation of weatherization applications, such as home

Carbonized scenarios	Quantitative Impact on GHG emissions	Qualitative Impact on air quality	Quantitative Impact affordability	Quantitative + Qualitative Impact on revenues & workforce
<b>Decarbonized Gas</b>	✓ Reduces emissions	✗ No significant change	✗ Pressures long-term gas cost	✓ Current system maintained
<b>Electrification</b>	✓ Reduces emissions	✓ Improves air quality	✗ Mixed, Depending on customer	✗ Large revenue reduction
<b>Hybrid electrification</b>	✓ Reduces emissions	✓ Improves air quality	✗ Lowest impact options	✓ Current system maintained
<b>Hybrid electrification with Geo MicoDistricts</b>	✓ Reduces emissions	✓ Improves air quality	? Dependent on cost allocation	✓ Additional Workforce Opportunities

insulation, and will review the regulatory structure needed to enable it.

- A feasibility study for networked geothermal systems, where PGW and the City will work together to identify funding for a feasibility study that investigates the technical and geological potential of block-level networked geothermal district systems, the necessary workforce skillset, and the utility financial and regulatory model for such a system.
- A local decarbonized gas program, where PGW convenes a working group with the Philadelphia Water Department and Streets Department to explore opportunities to convert City waste into biomethane, making use of local resources to reduce carbon emissions.

Additionally, the City of Philadelphia is committed to engaging the leadership of Gas Workers Local 686 to conduct a deeper workforce impact assessment for the various diversification strategies to better understand potential effects and opportunities.

The Study was produced by a consulting team led Energy & Environmental Economic (E3) and was guided by a working group composed of representatives from the City, PGW, the Philadelphia Gas Commission, the Philadelphia Facilities Management Corporation, the Philadelphia Energy Authority, and Gas Workers Local 686. In addition, the Study was informed by the public through a stakeholder workshop, an online survey, and through public comments solicited on a draft of the report findings. 🌟



# CHOOSE THE **ELECTRICITY** THAT'S RIGHT FOR YOU

from PAPowerSwitch.com

Electricity suppliers can sell over the phone or door-to-door, but we encourage residents to use PA Power Switch to find the supplier that's right for you.

START HERE

Are you currently enrolled in the Customer Assistance Program (CAP) with PECO?

YES

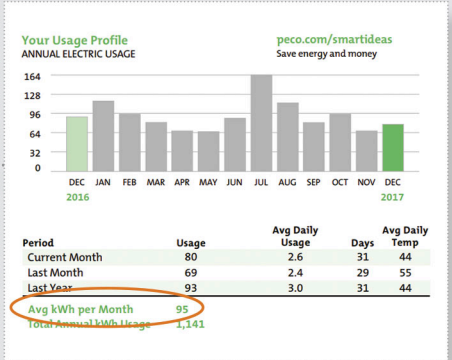
Residents currently enrolled in the CAP should continue to use PECO as their electricity supplier.

NO

Visit  
[www.PAPowerSwitch.com](http://www.PAPowerSwitch.com)

Enter your zip code, choose "Regular Residential Service," then click "See Full Results."

Enter your average monthly electricity usage (see sample PECO bill to right) to see rates for all suppliers in your zip code and consider the 4 factors below:



## 1. AVERAGE PRICE

You'll see an Estimated Per Month cost for each supplier. This is only a portion of your bill, so your actual monthly bill will be higher.

## 2. PRICE STABILITY

Choose a Fixed Price if you want your rate to stay the same. Variable rates may be lower at some times, but can end up costing you more.

## 3. CLEAN ELECTRICITY

You can choose a percentage (up to 100%) of your electricity from renewable energy. Also consider:

### GENERATION TYPE

"Renewable" is broadly defined by the PUC. Choose wind or solar generation to ensure you are purchasing zero-emission electricity.

### LOCATION

Under Special Programs, you can also choose PA Wind or Renewable PA to ensure your electricity is generated within the region, promoting local clean electricity.

## 4. HIDDEN FEES

### INTRODUCTORY PRICES

Some suppliers may charge you a low initial price, then increase the price after a period of time. This will be listed in the offer.

### ENROLLMENT FEES

Some suppliers charge an initial up-front fee to sign up. Depending on how much electricity you use, this might be a good option to lock in a lower monthly rate.

Click "Sign Up for This Offer" and follow directions to complete your switch. You'll receive a notification from both PECO and your new supplier.

If you choose an alternative supplier, you'll continue to pay PECO for electricity each month.

# Philadelphia's Food Waste Business Challenge

Across the world, a third of food raised or prepared never makes it to the dinner table. This uneaten food wastes time, energy and other resources, and is responsible for nearly 8% of global greenhouse gas emissions.

To begin to tackle this issue, in the autumn of 2021, the Office of Sustainability launched the City's first-ever Food Waste Business Challenge, a new pilot program engaging 10 Philadelphia food businesses in pursuing new wasted food prevention and recycling programs. The participating businesses – ranging from sit-down restaurants, to caterers, to co-op stores – worked directly with the Center for EcoTechnology (CET) to identify how and when food waste is created, strategize goals to target this waste, and implement a holistic strategy to reduce, repurpose, and divert wasted food.

The project was inspired by pilots completed in Denver and Nashville, both supported by the Natural Resources Defense Council (NRDC). Philadelphia is a member of NRDC's Food Matters MidAtlantic Cohort and received funding from NRDC along with the U.S. Department of Agriculture to carry out this project.

Between October 2021 and April 2022, all 10 businesses worked directly with the City and CET to eliminate food waste and other types of waste, like from food packaging. Along the way, the businesses worked 1-1 with CET to identify goals and overcome barriers to beginning new low-waste programs.

To get started, CET visited each business in-person to see how they buy, prepare, and serve food. Next, CET was able to learn about each business' goals and come up with a set of realistic but effective recommendations to help them curb their waste. It was important that these recommendations were consistent with the Food Waste Recovery Hierarchy, a system used to identify the best course of action to managing food waste from environmental, social, and economic perspectives.

In all, CET made nearly 20 individual recommendations with nearly half focusing on food waste prevention and source

reduction, which is at the very top of the Hierarchy. Additionally, CET was tasked with advising how businesses might carry out these recommendations in ways that are environmentally, socially, and economically beneficial to their local communities. For example, it is more environmentally and economically beneficial if a business composts their food waste with a local small or medium-scale composting company versus a large commercial composting company. Businesses participating in the Challenge were also encouraged to work together to find creative uses for their would-be-wasted food and establish partnerships essential to building Philadelphia's circular food economy. Have you heard the saying, "one person's trash is another person's treasure"? Well, for the businesses participating in the Challenge, one person's leftover iced tea is another person's cocktail mixer.

Each business thoroughly tracked their waste generation over three 1-week periods, between February and April. They used a waste calculator tool designed by the City and took pictures of their waste for evaluation by CET. This data was used to measure their progress along the way, and will be reflected in a final report by OOS and CET measuring the successes and shortcomings of the Challenge program.

The Challenge is an important step forward towards a more effective and collaborative relationship among the City and Philadelphia food businesses. To achieve Zero Food Waste, businesses must be able to offer critical feedback to the City that can shape sustainability programs and policy down the line. OOS wants to learn directly from businesses about their barriers to implementing Zero Food Waste strategies, as well as other challenges they may face to thrive as a sustainable food business in Philadelphia. 🌟



## 2022 FOOD CHALLENGERS

### FOOD WASTE CHALLENGERS

MUSI, BYOB

EARTH - BREAD + BREWERY

BIRCHTREE CATERING, LLC

THE RANDOM TEA ROOM

WECKERLY'S ICE CREAM  
PRODUCTION KITCHEN

BAR HYGGE

RELISH

BALBOA CATERING & SUPPER CLUB

WEAVER'S WAY CO-OP (MT. AIRY)

WEAVER'S WAY CO-OP  
(CHESTNUT HILL)



MAP OF  
PARTICIPANTS



CHALLENGE  
PARTICIPANT GUIDE



Birchtree Catering is a participant in the Food Waste Business Challenge

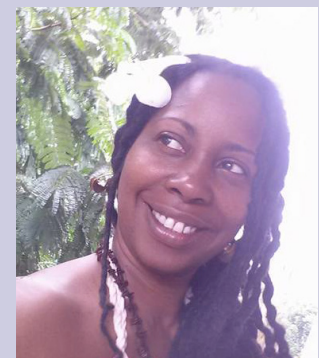


## Kirtrina Baxter

NOMINATED BY

**DAWN GRAHAM**

Since 2012, Ms. Baxter had been engaged in helping interested residents of Philly to stay active in the growth of urban farm initiatives and the development of the Philadelphia Land Bank bill. Her work has benefited many residents in Philadelphia in the support of those running and or interested in urban farms, especially in communities of color. She has supported initiatives of PHS, TreePhilly, Penn State Extension, and other City and State programs. She was also the co-organizer and co-founder of Soil Generation.



### The City of Philadelphia is **Standing Up Against Food Waste & Litter because they:**



Negatively  
impact the  
quality of life



Contaminate our  
soil & water



Back up sewers,  
potentially flooding  
streets & basements



Create pest  
problems



Give an overall  
negative perception  
of our neighborhood

**As members of the food  
provider community, we will  
do our part to help keep the  
streets clean by:**



- Obtaining an Outdoor Food Serving Permit at [bit.ly/3bAVFzd](https://bit.ly/3bAVFzd)
- Cleaning up the area before and after service
- Always providing trash bags while serving food
- Bringing out trash and supplies we bring in
- Asking meal guests to throw their trash away properly
- Talking about the negative effects of food waste and litter with other meal providers and meal guests
- Never leaving food unattended on the street
- When possible, arranging for neighborhood cleanups where we serve [bit.ly/3oCfklW](https://bit.ly/3oCfklW)



Office of  
Homeless Services



# Q+A with Dr. Kimberley McGlonn

DR. KIMBERLY MCGLONN IS THE FOUNDER AND CEO OF GRANT BLVD, A PHILADELPHIA-BASED FASHION BRAND THAT IS PUTTING PEOPLE AND PLANET FIRST. CHECK OUT THEIR DESIGNS AT 3605 LANCASTER AVE OR [WWW.GRANTBLVD.COM](http://WWW.GRANTBLVD.COM).

**Q: What was your inspiration for launching Grant Blvd?** A: I started Grant Blvd because I realized all the ways in which the formerly incarcerated were denied access to living wage jobs because of their convictions and the economic/recidivism crisis this barrier created. I wanted to create jobs. Viewing Ava Duvernay's documentary "13th" was catalytic for me. Beyond that, Grant Blvd is the block I grew up on in Milwaukee. My parents bought the house at 2677 and despite their middle class ease, lived in service to other Blacks because they understood the obstacles they(we) faced. My mom volunteered at a women's correctional facility and my dad was a food activist. In truth, Grant Blvd is the story of two American families: those who know stability, security & hope-which, until I was 13, was us. But it's also the story of a collapsed family, of adulthood depression, of self-medication with cocaine and religion, of weighing "criminal options" as a means of coping and surviving. Grant Blvd is the place where I learned the power of acting with love and of speaking out against inequity. It defines who I am.

**Q: How has your background informed your career pathways?** A: My autobiography and my honesty about it guided me into the classroom space as an English teacher. It was there that I first started my work as an advocate for the colonized and the disenfranchised. My next major evolution occurred when I was first elected as a Councilwoman in Montgomery County. Each of these experiences brought me so much nuanced learning about the need for intersectional responses to local, national, and international inequities and ultimately, suffering.



Caption.

**Q: How do you think fashion can be a tool for social justice?** A: Fashion is political- in ways it always has been. That said, when fashion design centers ethics and transparency it has the power to shift both conversation and culture. Through Grant Blvd I want to make the curation of sustainable, ethical closets ever more accessible to women who aspire to align their spending to their guiding personal values, and their sense of style to their budgets. And our incredible design team is making that happen every single day.

**Q: What are the connected roots between sustainability and racial equity?** A: Sustainability and racial equity are both issues of equity and strategic planning. And here's what I mean by that, we

can't create a future where all of us have our basic needs met if we fail to center access for all. And no approach that does that without accounting for racial equity IS sustainable.

**Q: What advice would you have for other entrepreneurs?** A: My advice for other entrepreneurs is to lead their enterprises with a sense of purpose- one with a foundation anchored in deep consideration of people and planet in alignment with profit. And this is something so few of us are prepared to do with specificity. If you're a business owner or social entrepreneur looking for community and accessible guidance, check out Build It Boldly ([www.builditboldly.com](http://www.builditboldly.com)), a digital platform I've created with the intention of offering just that. 🌟

# Guide to Green Jobs and Volunteer Opportunities



As Philadelphia continues to shift towards a greener, healthier, and more sustainable city, jobs and other opportunities to get involved are being created for residents of all ages. Check out our guide to learn how you can get involved!

## IN THE PUBLIC SECTOR

Municipal and utility employees make Philadelphia more sustainable through jobs like building maintenance, water and sewer operations, energy services, public transportation, and more.

- **City of Philadelphia:** [bit.ly/PHLgovjob](http://bit.ly/PHLgovjob)
- **PECO:** [bit.ly/PECOjobs](http://bit.ly/PECOjobs)
- **PGW:** [bit.ly/3ugu5j1](http://bit.ly/3ugu5j1)
- **SEPTA:** [bit.ly/3ueSrtl](http://bit.ly/3ueSrtl)

## LOCAL JOB BOARDS

Many local and national partners list career opportunities through online job boards.

- **Diversity Joint Venture for Conservation Careers:** [bit.ly/3u91LPm](http://bit.ly/3u91LPm)
- **Generocity:** [generocity.org/jobs/](http://generocity.org/jobs/)
- **Kleinman Center for Energy Policy:** [bit.ly/EnergyIntern](http://bit.ly/EnergyIntern)
- **Next City:** [bit.ly/352oPXM](http://bit.ly/352oPXM)
- **Philadelphia Energy Authority:** [bit.ly/3uiWQvx](http://bit.ly/3uiWQvx)
- **Sustainable Business Network:** [bit.ly/3trSAug](http://bit.ly/3trSAug)
- **Young Professionals in Energy:** [ypenergy.org/jobs](http://ypenergy.org/jobs)

## CAREER TRAINING PROGRAMS

Looking to build your skills or switch careers? Check out these local job training opportunities:

- **Energy Coordinating Agency's Knight Training Center:** Provides instruction and hands-on training on energy efficiency, environmental remediation, and renewable energy. [bit.ly/3qjBbSL](http://bit.ly/3qjBbSL)
- **Philadelphia Opportunities Industrialization Center and PECO:** An eight-week job training program offering placement services for energy-oriented careers. [bit.ly/EnergyTrainingPHL](http://bit.ly/EnergyTrainingPHL)
- **PowercorpsPHL:** A City of Philadelphia AmeriCorps initiative engaging young adults and returning citizens to enter and succeed in environmental service careers. [bit.ly/Powercorps](http://bit.ly/Powercorps)
- **YouthBuild Philly:** Offers residents without high school degrees hands-on learning in transforming abandoned properties into comfortable and affordable homes. [bit.ly/PHLYouthBuild](http://bit.ly/PHLYouthBuild)

## FOR YOUNG PEOPLE

- **Mayor's Internship Program:** Undergraduates entering their junior or senior years and graduate students are invited to apply for this paid internship. [bit.ly/MayorIntern](http://bit.ly/MayorIntern)
- **Philadelphia Youth Commission:** Young people can help make the city a better place by joining a committee on youth violence, programming, policy, health, or education. [bit.ly/PHLYouth](http://bit.ly/PHLYouth)

*Residents between the ages of 12-23 can join the Philadelphia Youth Commission. Residents between the ages of 23-34 can join the Millennial Advisory Commission.*

- **SEPTA Youth Advisory Council (YAC):** SEPTA riders between the ages of 16 – 23 can join to help connect youth to the region's public transportation network. [bit.ly/SEPTAYAC](http://bit.ly/SEPTAYAC)
- **Student Board Representative:** 11th and 12th grade students in the Philadelphia School District can apply to join the Board of Education. [bit.ly/3ilZb3j](http://bit.ly/3ilZb3j)
- **Sunrise Philadelphia:** Join the youth-led movement to stop climate change and create good jobs and a livable future in Philly. [bit.ly/3iwc0rz](http://bit.ly/3iwc0rz)
- **WorkReady Program:** Residents between the ages of 14-21 can apply for summer employment at sites across the city. [bit.ly/WorkPHL](http://bit.ly/WorkPHL)

# Turning the Lights on Home Energy Burden in Philadelphia

Energy burden is the percentage of a household's income that goes towards energy bills. Philadelphia is one of the most energy burdened cities in the country ranking 86% higher than the 3% national average. This means that Philadelphians pay more on their energy bills than the rest of the country. In fact, about 188,000 Philadelphians are paying well over 10% of their income on utility bills. Black, Indigenous, Latinx, and low-income Philadelphians are particularly impacted by high utility costs, in addition to being more adversely affected by climate change and environmental injustice than other residents.

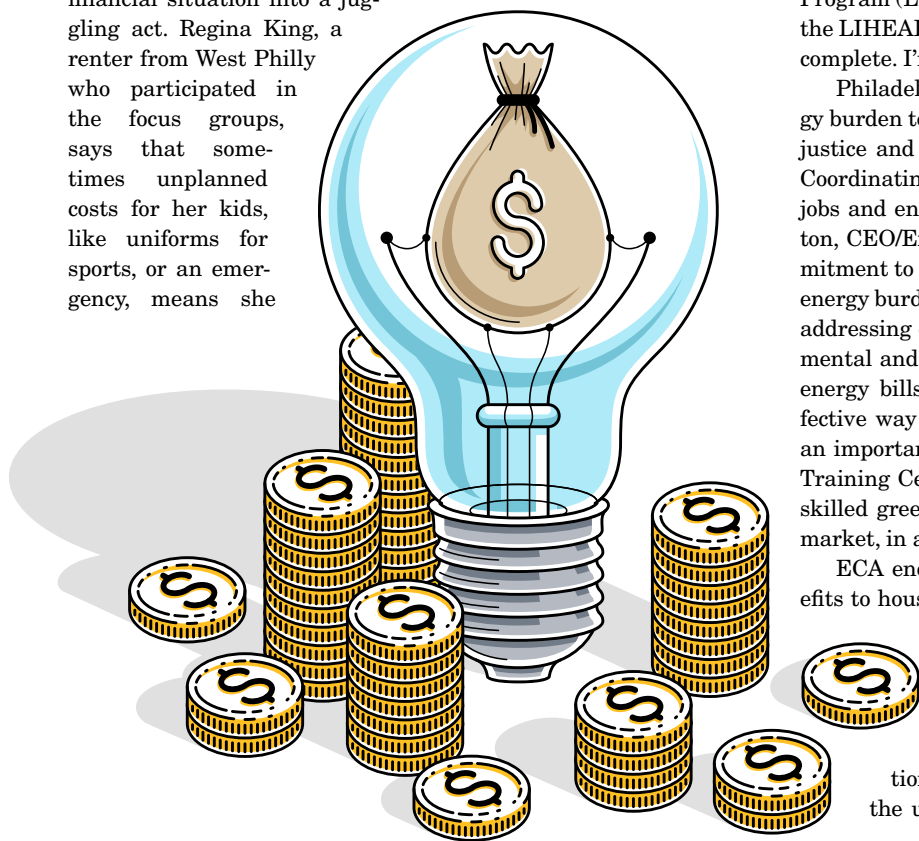
Addressing energy burden is at the intersection of housing, equity and climate action. In order to better understand the issue and inform actions to address it, the Office of Sustainability held a series of focus groups in the fall of 2020, hosting six local community-based organizations and 60 residents from high energy-burdened communities.

For the many Philadelphians struggling to pay today's high energy bills, the addition of other living expenses can disrupt budgets and turn an already difficult financial situation into a juggling act. Regina King, a renter from West Philly who participated in the focus groups, says that sometimes unplanned costs for her kids, like uniforms for sports, or an emergency, means she

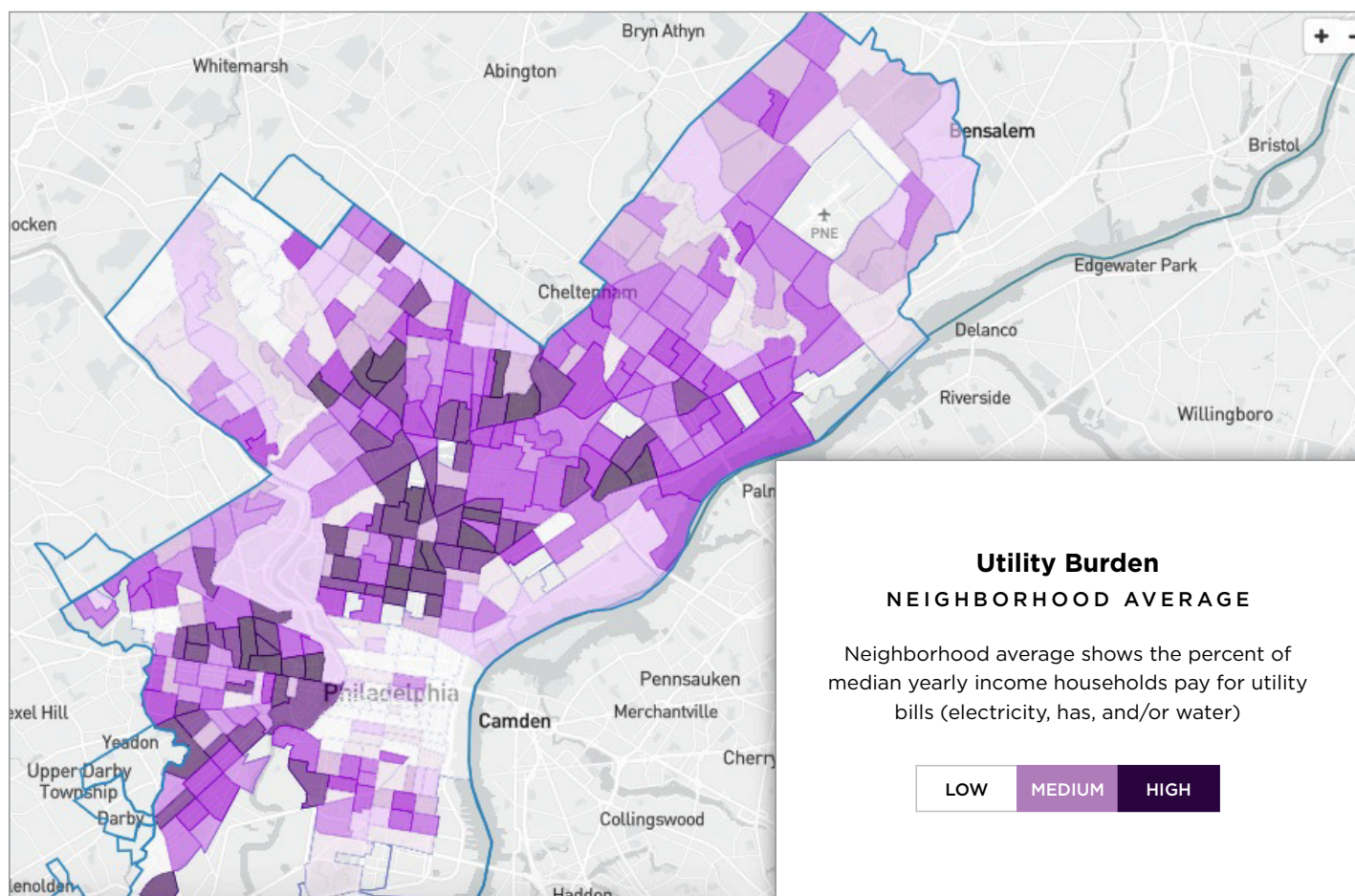
must balance rent and energy bills very carefully. "With COVID and the economy the way it is, everything is going up in cost. This summer, we had to have about four air conditioner units running to keep the house cool and the bill was just too high. I try to use my resources, like utility assistance programs and local nonprofits such as Achievability, as much as I can, and this was the only way I could pay." Regina says the help she received got her family through the summer, but now the winter heating bills are a challenge. "We received a helpful Low Income Home Energy Assistance Program (LIHEAP) grant, but it was not enough. My only option is the LIHEAP Crisis program, which is another application I need to complete. I'm hoping that's going to cover the bills."

Philadelphia has many organizations working to alleviate energy burden to help put the city on the pathway to prioritizing equity, justice and access to clean energy. One such place is the Energy Coordinating Agency (ECA), a nonprofit that works to grow green jobs and energy efficiency in low-income communities. Steve Luxton, CEO/Executive Director of ECA, says the organization's commitment to social and environmental justice also includes reducing energy burden in low-income households. "The significant results of addressing energy burden in Philadelphia translates into environmental and financial benefits by reducing emissions and lowering energy bills. Unquestionably, weatherization is the most cost-effective way to do this." Steve says home energy efficiency is also an important pathway to job growth. In its acclaimed Green Jobs Training Center, ECA provides workforce development to prepare skilled green-collar workers for the rapidly expanding green jobs market, in areas such as weatherization and solar installation.

ECA endeavors to bring green jobs and energy efficiency benefits to households across the city. One unique way they do this is through the Neighborhood Energy Centers (NECs), which provide direct support to Philadelphia communities. ECA's Director of Community Programs, Lorraine Horton says "The NECs are a community-staffed one-stop shop for all energy applications. They are the bridge between the community and the utility companies to keep low-income households from







having their services shut off, and get help with paying energy bills, something thousands of Philadelphians are in need of.” Lorraine believes that the community-based nature of the NECs means residents can receive assistance from their fellow community members, increasing trust and building deeper relationships.

Strawberry Mansion Neighborhood Advisory Council (SMNAC), a community-based non-profit organization, serves as one of the Neighborhood Energy Centers through its Neighborhood Advisory Council (NAC) and participated in the energy burden focus groups last year. The SMCDC team knows how important it is to share first-hand insight on the energy burden in the neighborhood in order to address the problem.

The team says their work with the community means they see many of the most prominent issues around home energy burden, and are ready to find solutions. For instance, Tonnetta Graham, SMCDC President, and Executive Director, says home maintenance is a major area of need that also perpetuates energy burden. “Many people wait until the heater is completely broken, not when there are warning signs, to deal with an issue. Deferred maintenance is what puts our houses at risk. We can help folks get help before it becomes dire, by sharing about all the programs each household is eligible for” she said.

Other major needs in the community include making adjustments to income guidelines for utility assistance programs and

other dated requirements, says Lenora Jackson-Evans, Executive Director of the Strawberry Mansion NAC. She explains that the Weatherization Assistance Program has restrictions that limit how much help someone can receive over a period of 15 years. “Just 10 years or less is hard on your home and the cracks and holes in your home can make the heating bill really high,” says Lenora who speaks from experience sharing that her shed kitchen makes her home drafty and her bills high.

Working to help their neighbors get access to resources like weatherization at the NEC can be difficult due to challenges with information promotion. “We have the programs, but the issue is getting them out. Some programs, like LIHEAP, are well advertised, but there are other resources that need more promotion, including our services here at the Neighborhood Energy Center!” says Lawrence Battle Jr., SMNAC Program Coordinator. All three members of the SMCDC team mentioned were born and raised in Strawberry Mansion and consider themselves proud members of the community.

Another focus group participant, SEAMAAC, is a non-profit, community-based organization located in South Philadelphia that aims to support refugees and immigrants, and works to support their community through challenges like energy burden. The organization’s Coordinator of Community & Family Wellness, Donna Backues, says providing her community with utility bill assistance

## IN THE KNOW

is vital since many face issues with access and time, and are often in ‘crisis mode’ when it comes to paying bills.

“This year I’ve had elders tell me that they’re cold in their homes, even though they have heat, because they keep it very low for fear of a high energy bill. Some community members have family who can help them figure out their bills, but we have many people, including undocumented immigrants and elders who really need help, so our programs and services can provide that.”

Though the primary programs residents seek are the federally administered LIHEAP and PECO’s Customer Assistance Program, she says another major need for her clients is finding help with home maintenance, similar to the need in Strawberry Mansion. “There’s a lot of poverty in the community, and many immigrant communities who have been here for a long time own their houses, but can’t afford the upkeep.” Many residents who she works with don’t benefit from weatherization programs that help save energy and lower costs due to lack of knowledge about the effectiveness of these programs, fear of strangers coming into their homes, and difficulty taking off work to be available, Donna shares.

In her South Philly home, Donna lives and works in a neighborhood where many of her clients live. “It makes a big difference when outreach workers/case managers are from the neighborhoods or ethnic communities that they help serve. It makes it easier to gain trust and get appropriate resources to the community.”

Engaging with residents, the Neighborhood Energy Centers, and other organizations providing their communities with critical support for home energy affordability is a core priority for the City. With the help of partnerships like these and the findings from the focus groups, OOS is now creating a plan to address energy use and equity in our homes, while also meeting our climate goals. 🌱

### Check out this list of Neighborhood Energy Centers to find your nearest one!



<b>ACHIEVEability</b>	5900 Market St.	(215) 57-8484	West Philadelphia, West Park & Overbrook
<b>Center in the Park</b>	5818 Germantown Ave.	(215) 848-7722	Northwest Philadelphia
<b>Congreso De Latinos Unidos</b>	216 W. Somerset St.	(215) 763-8870	North Philadelphia, East of Broad Street
<b>Frankford CDC</b>	4667 Paul St.	(215) 743-6580	Lower Northeast
<b>Germantown Crisis Ministry</b>	35 W. Cheltenham Ave.	(215) 843-2340	Northwest Philadelphia
<b>GPASS</b>	4943 N. 5th St.	(215) 456-1662	North Philadelphia, Olney, Logan, & Nicetown
<b>Greater Philadelphia Community Alliance</b>	2029 S 8th St.	(215) 468-1645	South Philadelphia, East of Broad Street
	1920 S 20th St.	(215) 336-3511	South Philadelphia, West of Broad Street
<b>HACE</b>	4907 Frankford Ave.	(215) 437-7867	Frankford, Kensington, & Northeast Philadelphia
	167 W Allegheny Ave	(215) 426-8025	Fairhill
<b>Hunting Park</b>	3760 N. Delhi St.	(215) 225-5560	North Philadelphia, Nicetown, Logan, & Olney
<b>Mt. Vernon</b>	631 N. 39th St.	(215) 475-9492	Mantua, East Parkside, Powelton Village
<b>New Kensington</b>	2515 Frankford Ave.	(215) 427-0350	Kensington, Frankford, & Northeast Philadelphia
	6926 Old York Rd.	(215) 572-1234 Ext 100	
<b>Nicetown CDC</b>	4300 Germantown Ave.	(215) 329-1824	West Oak Lane, North Philadelphia, Nicetown, Olney & Logan
<b>Philadelphia Chinatown Development Corporation (PCDC)</b>	1001 Vine St, 2nd Fl.	(215) 922-6156	Chinatown
<b>Southwest CDC</b>	6328 Paschall Ave.	(215) 729-0800	Southwest Philadelphia
<b>Strawberry Mansion</b>	2829 W. Diamond St.	(215) 235-7505	North Philadelphia, West of Broad Street
<b>We Never Say Never</b>	4427 Lancaster Ave.	(215) 452-0440	West Philadelphia, Overbrook, & West Park

With 16 Neighborhood Energy Centers (NEC) located throughout the city, we make it convenient for you to get utility assistance, in your own neighborhood. Most NEC offer a wide variety of services that can help you beyond basic utility services. Trained Energy Counselors are well versed on utility programs so they can help you get help back on track with paying your utilities and budgeting.

# Weatherization Tips

Use plastic sheeting or insulated curtains in the winter and aluminum foil in the summer over windows.

Use caulk, draft stoppers, or weatherstripping along the edges of doors and windows.

Put aluminum foil at the back of the radiators.  
Caulk along the edges of the baseboard heaters.  
Seal fireplace when not in use by closing the flue damper tightly or using a fireplace plug.

Use caulk and foam spray to seal cracks and openings in the home such as outlets, dryer vents, gas and water pipes.

Use heater blankets around your water heater.

Change or clean air filters every 3 months.

Bleed the radiator annually.

## Liz Robinson

NOMINATED BY

LISA ROSE



Liz has been a tireless champion of environmental causes in Philadelphia, for decades. After starting and leading the Energy Coordinating Agency for over 30 years, she has been at the helm of the Philadelphia Solar Energy Association since 2018. Her inclusive and wide-ranging work

includes: weatherizing low-income homes, providing training in clean technologies and educating our youth about the impact that solar energy can have on mitigating climate change. Her energetic passion and steadfast commitment to protecting our city, state and wider world are inspirational.





# Solarize PHILLY

GO  
SOLAR  
TODAY

SIGN UP AT  
[solarizephilly.org](http://solarizephilly.org)

**Save** money  
**Create** local jobs  
**Take action** on climate



## EARTH DAY PLAYLIST

Mercy Mercy Me  
(the Ecology)  
*Marvin Gaye*

All the good girls to  
go hell  
*Billie Eilish*

Feels Like Summer  
*Childish Gambino*

Big Yellow Taxi  
*Joni Mitchell*

Trouble in the Water  
*Common*

Global Warming  
*PitBull*

Despite Repeated  
Warnings  
*Paul McCartney*

The Three Rs  
*Jack Johnson*

Wake Up America  
*Miley Cyrus*

What a Wonderful  
World  
*Louis Armstrong*

Apocalypse  
*Wyclef Jean*

I Need to Wake Up  
*Melissa Etheridge*

Pollution  
*Bo Diddley*

New World Water  
*Mos Def*

Don't Go Near the  
Water  
*Beach Boys*

Beds are Burning  
*Midnight Oil*

Sun is Shining  
*Bob Marley*

Heal the World  
*Michael Jackson*

Idiotique  
*Radiohead*

Temperature  
*Sean Paul*

Nothing But Flowers  
*Talking Heads*

After the Goldrush  
*Neil Young*

Earth  
*Lil Dicky*

Truth to Power  
*One Republic*

Manifest  
*Andrew Bird*



## THE BENEFITS OF PUBLIC TRANSPORTATION ARE LARGER THAN THEY APPEAR

The rapid climate change we are seeing now is caused by humans using oil, gas, and coal for homes, factories, and transportation. Did you know SEPTA operates a fully-electrified multi-modal rail system and has one of the largest “green” bus fleets in the nation — and SEPTA commuters have 1/3 the carbon footprint of those who travel by car? Learn more at [ISEPTAPHILLY.COM](http://ISEPTAPHILLY.COM).





# Philadelphia Greenhouse Gas Inventory

Philadelphia is committed to achieving carbon neutrality by 2050. But how do we track our progress towards that goal? Greenhouse Gas (GHG) inventories help policymakers assess the current sources of emissions, identify trends, and make decisions about climate mitigation priorities. In 2021, the Office of Sustainability conducted a Citywide GHG inventory for calendar year 2019 to account for emissions and compare it against our 2006 baseline to track progress. This inventory follows international protocols for accounting for GHG emissions and includes direct emissions produced in Philadelphia, as well as indirect emissions from sources like electricity generated elsewhere, but used in the city.

## 2019 GHG inventory Highlights

- In 2019, Philadelphia emitted 20 Million Metric Tons of Carbon Dioxide equivalent (MMTCO<sub>2</sub>e), a reduction of 20% from 2006 emissions. The electricity grid got significantly cleaner during this time—electricity generation from coal decreased from 45% in 2006 to 12% in 2019.
- Philadelphia's electricity use declined slightly in 2019 from a 2006 baseline, despite an increase in population and need for cooling.
- Buildings and Industry remain the biggest contributors to our GHG emissions, accounting for almost 70% of city-wide emissions, with the majority coming from energy use in commercial and residential buildings, primarily from natural gas use; however, emissions from this sector declined by approximately 30% since 2006. The commercial sector accounted for 39% of these emissions and the residential sector for 31%.
- The PES refinery accounted for approximately 7% of city-wide emissions in 2019, despite operating for only half the year. Its closure led not only to a reduction in overall emissions but may also have had downstream effects on marine freight shipped and corresponding emissions.
- Transportation emissions overall increased by 5% since 2006, likely due to an increase in Vehicle Miles Traveled, which may have been a result of population increases in the city.
- Emissions from waste and wastewater treatment declined by 46% since 2006, driven primarily by a reduction in the amount of waste generated in the city.
- Philadelphia's tree canopy sequestered approximately 78,000 MTCO<sub>2</sub>e, despite a net canopy decrease of 6% since 2006.



# 2019 Greenhouse Gas (GHG) Inventory Highlights

## 20.5

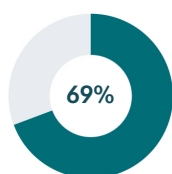
MMTCO<sub>2</sub>e in 2019<sup>1</sup>

## 20%

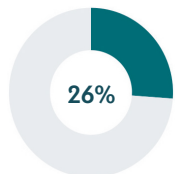
reduction from 2006 baseline

**Buildings and Industry contribute 69% of GHG emissions in Philadelphia<sup>2</sup>**

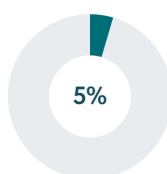
### Buildings & Industry

10.5 MMTCO<sub>2</sub>e

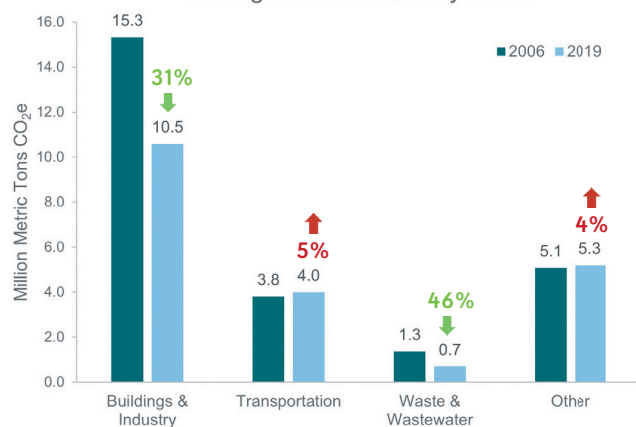
### Transportation

4.0 MMTCO<sub>2</sub>e

### Waste & Wastewater

0.7 MMTCO<sub>2</sub>e

Change in Emissions by Sector



## 2019 At a Glance

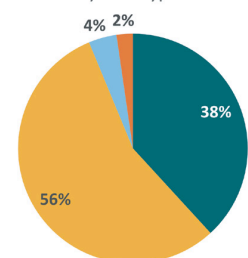
Philadelphians emitted less GHG per capita in 2019 than they did in 2006.

**13 MTCO<sub>2</sub>e** per capita in 2019

**24%** reduction since 2006

**78,804 MTCO<sub>2</sub>e** sequestered by Philadelphia's tree canopy in 2019.

Energy Use in Buildings by Fuel Type

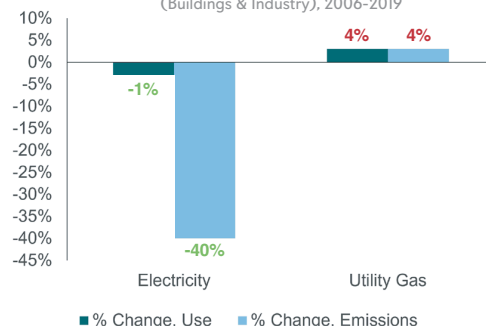


Electricity Gas Steam Other Fuel

Electricity and gas account for most energy use and emissions in Philadelphia's buildings.

Emissions from electricity use in buildings and industry declined by 40% since 2006. Emissions from gas increased by 4%.

Changes in Energy Use and Emissions (Buildings & Industry), 2006-2019



% Change, Use % Change, Emissions

## Key Causes of Changes in Emissions (2006-2019)

### Buildings & Industry

- Electricity generation from coal decreased from 45% in 2006 to 12% in 2019, resulting in a 40% decrease in emissions from electricity use.
- Philadelphia's refinery closed, reducing total 2019 emissions by 7%.

### Transportation

- Cars and trucks in Philadelphia traveled 1.4 billion miles in 2019— 23% more than in 2006.
- Emissions from passenger rail (SEPTA and AMTRAK) decreased by 37%.

### Waste & Wastewater

- Water and wastewater management improvements reduced emissions by 9%.
- 34% reduction in tons of waste incinerated and sent to landfills.<sup>3</sup>

### Other Sources

- Lower electricity transmission losses led to a 55% decrease in associated emissions.
- The airport served 4% more travelers and over 7% more cargo. Emissions increased by 3%.
- Tree canopy decreased by a net 6%.

1. GHG emissions in million metric tons of CO<sub>2</sub> equivalent.

2. Excluding roughly 5.2 MMTCO<sub>2</sub>e of emissions referred to as Basic+ and Scope 3. These emissions are included in the 20.5 MMTCO<sub>2</sub>e total and are listed as "Other." "Other" includes aviation, industrial gases (refrigerants and insulators), and changes in tree cover.

3. Does not include waste hauled by private handlers to out-of-state facilities, as information is not available.



# Heat Response PHL

Across Philadelphia, extreme heat disproportionately impacts low-income communities, often communities of color, an inequity that influences residents' health, safety, and daily lives. The Trust for Public Land's Heat Response project engages community members in Fairhill, Grays Ferry and Southeast Philadelphia to create public art that addresses the question: "Why should we care about urban heat and what can we do about it?"



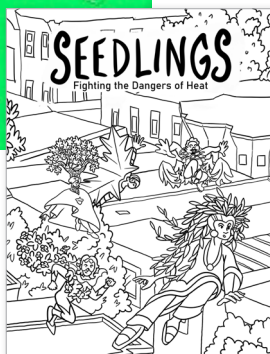
A team of four local artists, supported by nationally renowned artist Eve Mosher and neighborhood leaders, have been working since 2020 to listen to community voices, utilizing art as a tool to amplify their lived experiences. Heat Response PHL is helping to foster resilient, connected communities, drive policy change and achieve equity across Philadelphia neighborhoods in response to rising temperatures.

Artist Jenna Robb has been working in Grays Ferry to hold art workshops for children, connect both young and older generations in communication about extreme heat, and collaborate with community stakeholders on mural design.

In Southeast Philadelphia, Jose Ortiz-Pagan has facilitated design workshops with community organizations to develop a shade structure and led neighborhood clean-ups.

In Fairhill, Linda Fernandez and Keir Johnston of Amber Art and Design brought together students from Temple University's Tyler School of Art and Architecture, students and youth at Congreso de Latinos Unidos and community members to develop a bilingual, interactive coloring and activity book entitled "Seedlings." Seedlings helps children connect their real-life experiences with extreme heat to the climate crisis and help them brainstorm ways to cool their neighborhoods. Seedlings captured the attention of youth and adults,

leading to a partnership with the city of Philadelphia's Parks and Recreation Department to distribute the activity books to the city's young residents. 🌱



DISTRIBUTION OF SEEDLINGS  
CONTINUES AROUND THE CITY AND  
A PDF VERSION IS AVAILABLE FOR  
DOWNLOAD ONLINE!





# Meet FPAC



The Philadelphia Food Policy Advisory Council (FPAC) is composed of community members, food systems professionals, and policy makers group who work together to drive and advocate for food policies that create a more just food system in Philadelphia.

Beginning in 2020, FPAC embarked on a journey of redefining its mission, vision, values, and ways of working.

Four hundred years after the first enslaved Africans were brought to this country to work the land and more than 70 years since red lines were drawn across our city declaring which neighborhoods were worthy of investment, we are still suffering from the effects of this deep history of racist policies. This history still determines which communities are more likely to experience hunger, suffer from diet-related diseases, grow, and cook our food, and which communities are more likely to control land and have a voice in political processes.

For generations, Philadelphia's most marginalized communities have worked to preserve their culture, heal their people, and feed their communities. From growing nourishing foods in back-

yard gardens and community farms to serving up free breakfasts through faith-based and neighborhood centers, Philadelphia's immigrants, refugees, working people, and people of color have provided innovative solutions to our city's food problems.

To ensure a just food system, food policies must not only make amends for this history but must also incorporate and amplify the wisdom of marginalized communities whose voices have historically not played a role in the policies that impact them.

FPAC's vision is to build a food system where all people in Philadelphia have the power and resources to access and control our food, land, and labor.

Our Theory of Change: If FPAC centers the wisdom and builds the political influence / power of people most impacted and transfers power and resources from wealthy institutions, nonprofits, and government to people most impacted then we achieve our vision where all people in Philadelphia have the power and resources to access and control our food, land, and labor.

## IN 2021, FPAC BEGAN MAKING TRANSFORMATIVE CHANGES TO ACHIEVE THIS VISION.

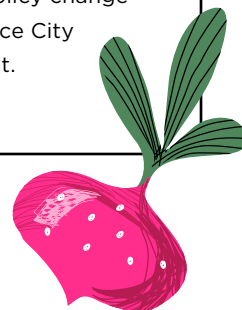
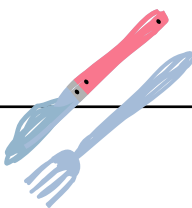
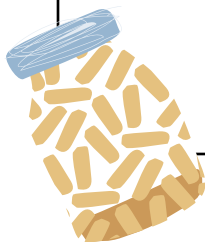
We significantly re-shaped our membership to transform from being primarily institutionally led to be led by members with lived experience with food injustice, and who raise the voices and perspectives of marginalized communities.

We began compensating community members for their time, wisdom and energy participating in the Council.



We changed our ways of working to uplift the voices of community members in leadership, decision and policy making to ensure a Philadelphia with food policy crafted by people who have the most at stake in changing a system often referred to as "food apartheid" will result in a more just, delicious, and nourishing place for all!

We began implementing a strategic planning process to develop a clear plan and roadmap for achieving our vision. Through this process, FPAC will continue to transform its day-to-day operations to reflect what residents and communities need to affect policy change and influence City government.





## FOOD POLICY RECOMMENDATIONS FOR 2022

After listening to more than 500 Philadelphians who either lead hunger relief work in their communities or attended the two public meetings hosted by the Urban Agriculture Plan, we came up with the following recommendations.

- Support City Food Program Capacity
- Increase Access to Ownership of Land for Agriculture Uses
- Adopt a Good Food Purchasing Policy
- Expand Local Food and Produce Distribution

These recommendations were chosen based on the impact they will have in FY23 and how well they:

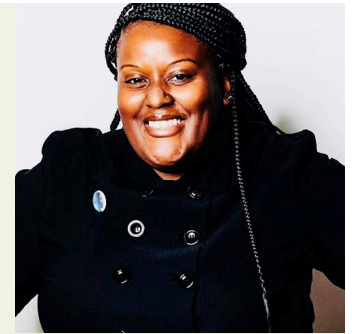
- Are led by people who have dealt with food injustice
- Meet the coexisting needs of people who grow food, work in restaurants, experience hunger, and provide food for communities
- Address racism and transfer power and resources to historically disinvested communities
- Align with the priorities of local food justice and sovereignty movements

On November 30, 2021, appointed members Dimka Braswell, Shayla Felton-Dorsey, Amy Goldstein, and Isel Otero-Vera presented FPAC's Fiscal Year 2023 Policy Recommendations to leaders from Mayor Kenney's administration and called on the City of Philadelphia to take action in Fiscal Year 2023 towards our long-term vision of a just food system.

Visit [www.phillyfpac.org/food-policy](http://www.phillyfpac.org/food-policy) for more details on each recommendation.

## APPOINTED MEMBER STORY

My name is **SHAYLA FELTON-DORSEY** and I am a self-taught, community chef. I use culinary arts and literacy as a vehicle to address food insecurity while providing accessible cooking classes and demonstrations with community organizations. The Philadelphia Free Library has a commercial kitchen and a Culinary Literacy Center. At the Culinary Literacy Center, I teach free English language learning classes with the Edible Alphabet program and Wellness Wednesdays with HIAS. I teach, empower, and serve my disinvested communities, which include seniors, youth, immigrants, and refugees. I hold space for others in the kitchen and guide them in a gentle way through recipes.



My path to becoming a professional chef and working with youth has inspired me to support the confidence and empowerment of young women entering the hospitality industry. My dream is to lead a culinary arts cohort for Black, Brown, and Indigenous young women that offers mentorship, workforce development, and entrepreneurship within the culinary arts field taught by other women in hospitality.

My willingness to serve FPAC and advocate for my community is from my own lived experience as a solo entrepreneur and with government assistance like SNAP and small business grant programs. The pandemic added another layer and magnified the issues with navigating business finances, providing jobs for the community, and supporting myself and my family. With the grants/loans being only one-time solutions, I understand how city contracts can benefit, sustain, and affect an owner's family and community by creating jobs and income. The City does not offer enough opportunities that are accessible for Black, Brown, and Indigenous food businesses like mine.

In addition to seeing more Black, Brown, and Indigenous leadership at FPAC and support from the City, my vision for Philadelphia is a food system that supports racial equity and the development of Black, Brown, and Indigenous-owned food businesses to close the racial wealth gap.

## Get Involved!




All FPAC subcommittee, general, and executive meetings are open to the public. Learn more at [www.phillyfpac.org/getinvolved/](http://www.phillyfpac.org/getinvolved/)

- Join FPAC's mailing list
- Attend an executive meeting
- Follow @PhillyFPAC on social media
- Join a subcommittee
- Attend a general meeting
- Nominate yourself or someone else for FPAC


FPAC welcomes questions, comments, feedback, and suggestions. Get in touch by emailing [fpac@phila.gov](mailto:fpac@phila.gov).

# COVID-19 Food Resources



**ALL  
PHILADELPHIANS  
ARE ELIGIBLE  
FOR FREE FOOD!**

Philadelphia residents can visit [www.phila.gov/food](http://www.phila.gov/food) year-round to find over 100 free food and meal sites located throughout the city. The free food distribution map started in 2020 as part of the City's COVID-19 emergency response along with standing up a food distribution warehouse and network of 50 free food sites when the existing food pantry network experienced a decline in donations and volunteers.



No longer a specific emergency response, the free food distribution map is now part of the Office of Children and Families' (OCF) ongoing food security work in partnership with Philabundance, Philadelphia Corporation for the Aging, the Office of Homeless Services, the School District of Philadelphia, and Share Food Program. In the summer, [www.phila.gov/food](http://www.phila.gov/food) also includes over 500 free summer meal sites for kids sponsored by Philadelphia Parks & Recreation, the Philadelphia Housing Authority, and Nutritional Development Services. During the academic year, the website also includes Philadelphia Parks & Recreation school break meal sites.

OCF works with partners, including the City's Office of Innovation and Technology (OIT) to keep the map regularly updated with information on where to find free student meal sites, older adult meal sites, general food sites, and general meal sites. No ID or proof of income is required for food sites or general meal sites. The map is available in 6 languages and residents can type in their address to find the food and meal sites closest to them. OCF continues to work with its partners to expand information about free food resources available on [www.phila.gov/food](http://www.phila.gov/food). 🌟

## Step Up to the Plate

In April 2020, the Step Up to the Plate initiative was born with the goal of providing food and aid to Philadelphians during the pandemic. Run by Broad Street Ministry, Prevention Point Philadelphia (PPP), SEAMAAC, and the City of Philadelphia, Step Up to the Plate coordinated a team of caterers and restaurants, service providers, and other partners to serve individuals experiencing housing and food insecurity. The program distributed a total of 878,165 meals over the 20 months of the program.

The program's primary focus was to serve nutritious and professionally-created meals at three strategic locations. The meals were provided through partnerships with local restaurants and catering companies, supporting the restaurant industry as they faced pandemic-induced economic challenges.



Beyond food, Step up to the Plate also offered other services to Philadelphians undergoing food and housing insecurity. Services included: COVID-19 testing and vaccinations, clothing distribution, federal financial assistance registration, and Narcan and overdose training. Through the Step Up to the Plate initiative, SEAMAAC and PPP administered over 6,000 COVID tests and 1,200 vaccines. Additionally, Broad Street Ministry distributed over 11,000 personal care items and 10,000 pieces of clothing during the program's twenty months.

This success would not have been possible without support of external funders, the City, and countless other partners. While Step Up to the Plate is no longer operational, similar meal sites and COVID-19 related services continue to be offered throughout Philadelphia. Individuals can visit [phila.gov/food/](http://phila.gov/food/) for locations.

Additionally, Broad Street Ministry will continue to serve free lunches Monday - Friday from 11:30 am – 1 pm at 315 S. Broad Street. SEAMAAC has a food pantry available to the neighborhood Mondays and Tuesdays from 10 am – 2 pm at 1711 S. Broad Street. And, finally, PPP is also continuing lunch service on a much smaller scale. 🌟





# Denis Devine

NOMINATED BY

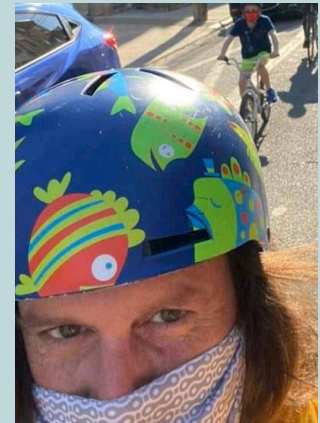
ASH KUMAR AND JOSHUA MELL

Denis is the ultimate think global act local guy and a community linchpin. He is more concerned about climate change than most, but he also builds his life around healthy ways of trying to do something about it.

Several of Denis's big contributions in the Riverwards that make him a local climate action champion are bike-related. He's drawn attention to a seriously dangerous spot for bikes going down the Delaware. He's helped to get the city to install and maintain parking counter-measures to keep bike

commuters safe. Denis has also been leading groups of K-5 kids around the neighborhood on bikes every few weeks. He's involved dozens of families and the bike rides are a subtle but tangible way of teaching about a lower impact way of life and that the streets are for everyone.

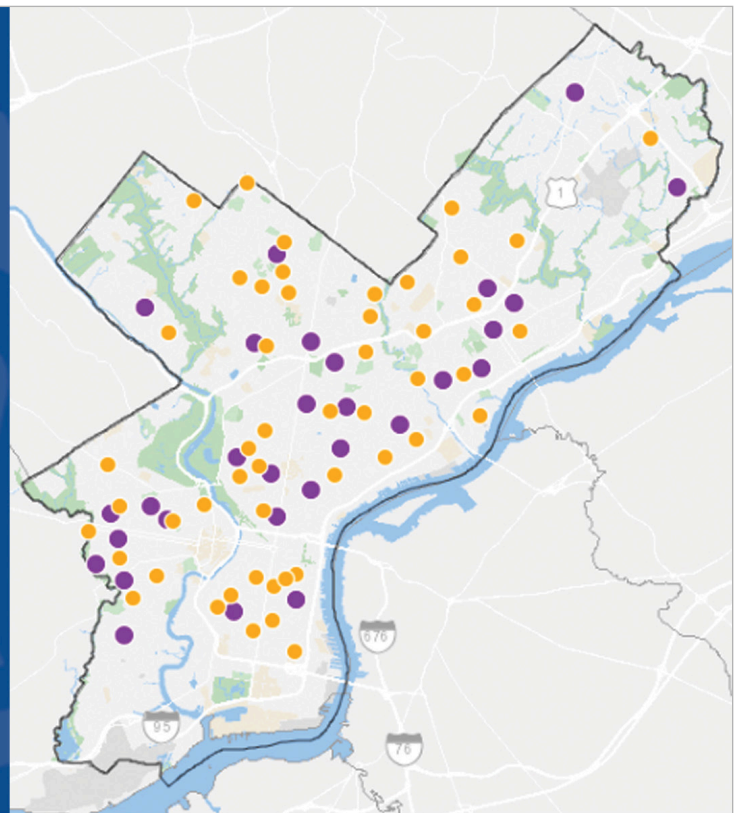
At Adaire School, Denis coordinated with Parks and Recreation for the green rain gardens, mulching and maintenance, and also has, for more than a decade led and coordinated neighborliness via a Riverwards Dad's Night group.



## FIND FREE FOOD AND MEALS

### SEARCH BY ADDRESS FOR SITES CLOSE TO YOU.

## PHILA.GOV/FOOD



# Philadelphia Urban Agriculture Plan, *Growing from the Root*

*Growing from the Root* will be Philadelphia's first urban agriculture plan, developed alongside Philadelphia farmers, gardeners, and urban agriculture advocates. *Growing from the Root* establishes a 10-year framework for investing in agriculture and food justice. The plan names the resources, policies, processes, and programs needed to sustain urban agriculture in Philadelphia for future generations.

## What is Urban Agriculture?

Urban agriculture is commonly known as urban farming and refers to growing plants and rearing animals that produce food within a city. Urban agriculture is an important part of local food systems. Through urban agriculture, farmers and gardeners contribute to the economic, social, and environmental benefits of growing food in and near large population centers.

Philadelphia is fortunate to have a robust tradition of urban agriculture, rooted in Black, immigrant, and refugee communities and growers that have nurtured the land and people for generations. Urban agriculture takes many forms and occurs in many different places across the city. Where gardeners and farmers grow in Philadelphia is not just about where they can carve out space from the urban landscape. In many parts of the city, growing food is borne of necessity, in response to a need for nutritious, affordable food options in areas where those options are limited by structural and environmental racism.

About two-thirds of gardens or farms in the city today are in racially concentrated areas of poverty where over 50% of residents are people of color and at least 20% of residents live below the poverty line. This affirms local historic Black and Brown narratives about the role urban agriculture has played in providing food, especially where needs are dire.

## Vision for Philadelphia's Food System

For over a decade, community advocates and City officials have called for resources to build an equitable and sustainable food system to meet the needs of Philadelphia



residents. Land insecurity, hunger, and food-related illness, such as diabetes, high blood pressure, and heart disease disproportionately affect communities of color in Philadelphia. Systemic structural, racial, and socio-economic barriers prevent communities from being able to create and own their food systems.

*Growing from the Root* will consider how to overcome these barriers through a more localized food economy. The report will call for a new and expanded organizing structure for Philadelphia's food system.

The new framework for Philadelphia's food system and the vision and strategies that make up the Plan are inspired by the Fibonacci Spiral. Also known as the Gold-

en or Sacred Spiral, the spiral appears in nature at a range of scales -- from shells, ferns, flowers, and vegetables to galaxies in our universe far above. *Growing from the Root* will conceptualize Philadelphia's food system as a spiral that allows for expansion, as opposed to the conventional food system chain. The Philadelphia food system grounds LAND at the center and PEOPLE as the force surrounding and moving through the spiral, touching every element of Philadelphia's local food system including PRODUCTION, CONSUMPTION, PREP+DISTRIBUTION, FOOD WASTE REDUCTION AND RECOVERY, and INSTITUTIONAL SUPPORT.



***Growing from the Root* is grounded in a public process.**

The planning process included multiple opportunities for community engagement. A Steering Committee that guided the plan's development included representatives from City agencies, partner organizations, and the community. The Plan is grounded in the voices, vision, and values of the people who have the most at stake—the diverse community of growers and gardeners across Philadelphia.

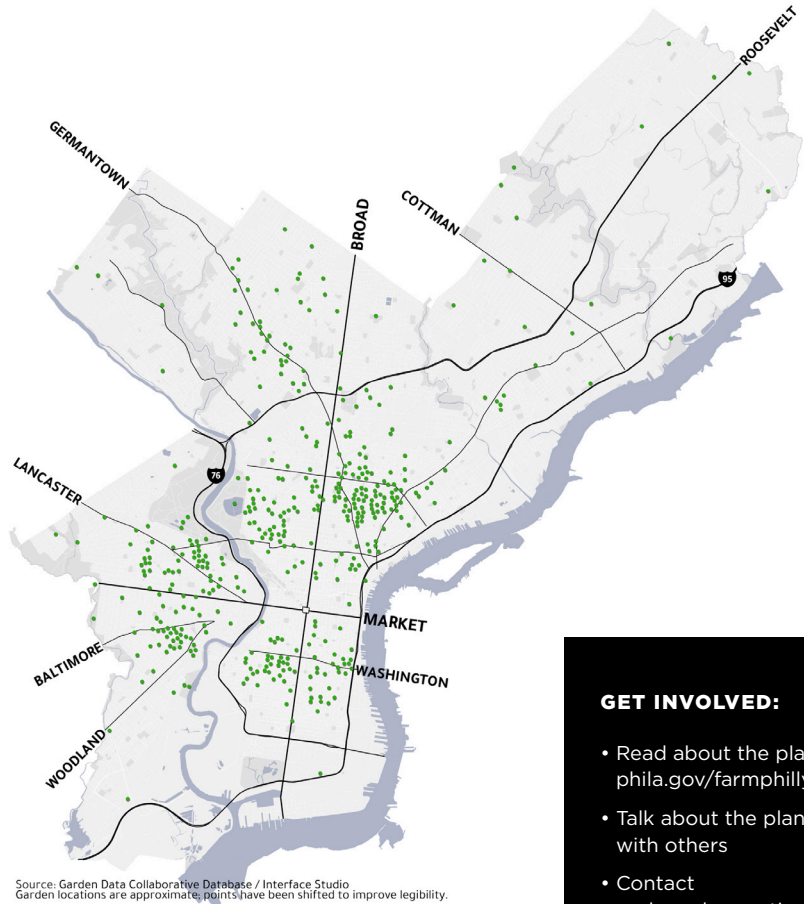
**Who is this plan for?**

This plan is for **the growers**, the folks who have been doing this self-determined community work for generations, the people who just started because of the pandemic, the folks who do this for survival, those who do this for the safety and mental health of the kids on their block.

This plan is also for **those who hold decision-making power and the resources to make changes** that invest in and transform our local food system into a system that is more just.

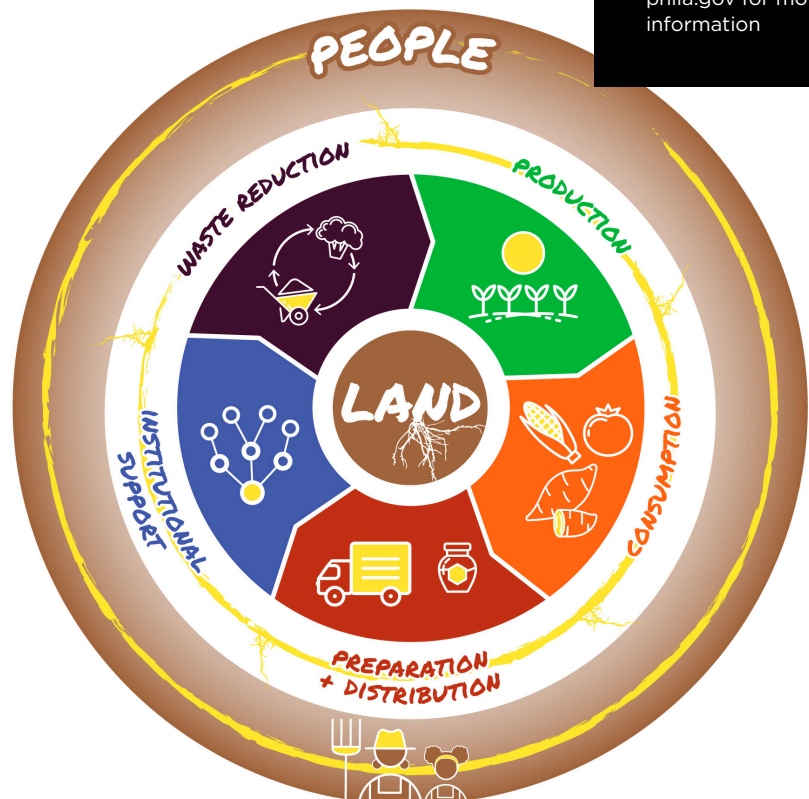
**If you eat food, this plan is for you, too.** Because of the interconnectedness of urban agriculture, the people who are impacted by *Growing from the Root* are not limited to urban farmers and gardeners. *Growing from the Root* has the potential to influence the entire local food system of Philadelphia, making it relevant for all who consume food within City boundaries, all who care about climate action and the environment, as well as those who work in food, land, and environmental industries.

**About the authors:** With support from the William Penn Foundation, Philadelphia Parks & Recreation co-develop the plan with community partners. This story was adapted from *Growing from the Root*, a plan produced in partnership with Soil Generation, a Black and Brown-led coalition of growers, and Philadelphia-based planning firm Interface Studio.



**GET INVOLVED:**

- Read about the plan: [phila.gov/farmphilly](http://phila.gov/farmphilly)
- Talk about the plan with others
- Contact [parksandrecreation@phila.gov](mailto:parksandrecreation@phila.gov) for more information



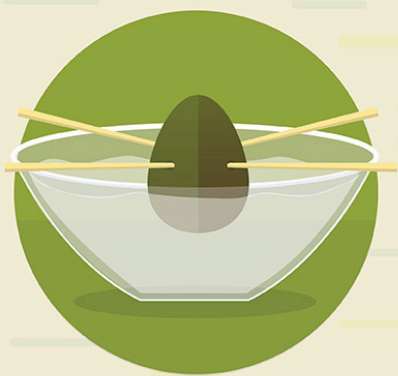


## ACTIVITY

# How to Regrow Vegetables

An estimated 30-40% of the food supply in the United States goes to waste. This is caused by many reasons and can occur during harvest, processing, shipping, storage, retail, or once the food reaches the consumer. You can reduce your food waste by buying only what you know you'll use, donating unwanted packaged goods, and composting. Check out the guide below to learn how you can grow vegetables using food scraps!

### — Avocado —



Use toothpicks to balance pit, root side down, in small jar of water



Place in sunlit area

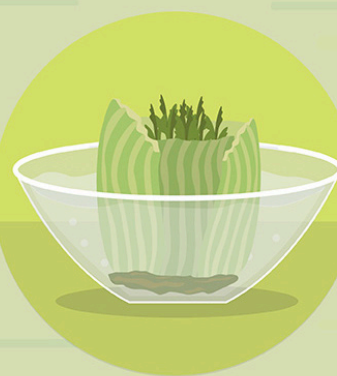


Change water every day



When tree is seven to eight inches tall plant in 10-inch pot

### — Celery —



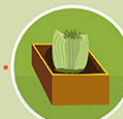
Place celery base in small bowl with water, stalks facing upright



Place bowl in sunny area



Change water every other day



After five to seven days, move base to planter or garden and cover with soil up to leaf tips

### — Green Onions, Leeks & Scallions —



Place greens in jar with water



Put jar on windowsill



Change water every other day

### — Cilantro —



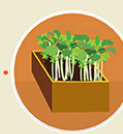
Place stems in jar of water



Place in sunny area



Change water every day



When roots grow, plant stems in a pot

## — Basil —



Strip leaves from  
¾ of stems



Place  
stems in  
jar of water



Place in  
sunny, but not  
too hot, area



Change  
water every  
other day



When roots grow to  
about 2 inches, plant  
stems in 4-inch pot

## — Romaine Lettuce —



Place bottom of  
romaine hearts  
in a bowl with a  
½ inch of water



Change water  
every day



Keep bowl  
in a sunny  
area



Once lettuce  
sprouts, plant  
hearts in garden

## — Potatoes —



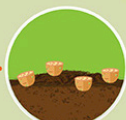
Cut potatoes  
into two  
pieces



Make sure  
each half  
has at least  
1-2 eyes



Let pieces sit at  
room temperature  
overnight until  
they are dry  
to the touch

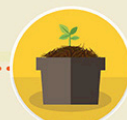


Plant about  
one foot apart  
in 8 inches  
of soil

## — Tomatoes —



Rinse tomato  
seeds and  
allow to dry



Plant in  
pot with  
soil



Once sprouts  
are a few  
inches tall,  
transplant them  
outdoors



# Connecting to Nature Through Art



MIGRATION AT HEINZ, 2021. PHOTO: SARAH KAVAGE



Building eco-tech structures with invasive plant material, weaving climate science into striking tapestries and supporting the growth of a healthy forest are only some of the ways the Environmental Art Program at the Schuylkill Center has worked on restoring people's connection to nature over the last two decades.



PORTAL AT GATEWAY PARK, 2021. PHOTO: ROBERT ZVERINA

Last year the Center participated in the tri-state art initiative Lenapehoking~Watershed (the land of the Lenape people and today's approximate geographical area of the Delaware River Watershed) commissioned by the Alliance for Watershed Education of the Delaware River (AWE). The initiative aims to activate our watershed region in the public's imagination through art, education and playful engagement.

Two key projects were launched: Aqua Marooned! is a new card game, created by Adrienne Mackey and her team at Swim Pony, that explores nature using quick wit, physical activity and creative invention. The card decks are free to take and play, and are available at your nearest AWE site. The cards can be played everywhere where one can find nature.

For Water Spirit environmental artist Sarah Kavage has created an array of art installations in our regions' fields, wetlands and woods. Using locally-sourced natural materials, Kavage's sculptures are rooted, literally and figuratively, in the specific landscapes of the host sites. For example, on the Schuylkill Center's grounds Kavage built in collaboration with Iraqi designer Yaroub Al-Obaidi Al Mudhif – A Confluence. A mudhif is a traditional Southern Iraqi guesthouse, made entirely out of bundled and thatched invasive reeds, called phragmites. Al Mudhif is the first of such structures in North America.

While phragmites is an invasive plant in the US, it is native to the Middle East and Europe. By productively applying this plant as building material, Kavage calls our usual conservation methods into question. "That's the beauty of art," she explains her approach to invasives in a more practical and metaphorical way. "Similar to demonizing anything that is sort of out-of-place,

I would love for this work to rather provoke a more nuanced understanding of that language around displacement and the movement of plants and people." Kavage's work draws on community organizing, spans long time horizons, and takes in a sweeping view to frame the examination of systems, ethics, and landscapes. Her dramatic gestures are humanized and given depth by the intimacy of individual interactions and unexpected encounters.

The mudhif was erected by the hands of hundreds of volunteers, particularly by US veterans and Iraqi refugees from the US wars. The mudhif was designed to be used as a space for healing and dialogue across cultural, religious and political boundaries. As a spatial and metaphorical vessel for living with nature, the mudhif brings attention to the changing landscape in our current climate. Albeit severely impacted during last year's Hurricane Ida, the structure is holding up in its winterized state. For the late spring the Schuylkill Center and the artists are planning to invite the public again for a celebration and respectful goodbye of this unique installation, creating a space for contemplation, conversation and awakening in nature.



Check out the mudhif at [www.schuylkillcenter.org](http://www.schuylkillcenter.org) and other Water Spirit installations throughout the region and learn more about the art initiative at [www.lenapehoking-watershed-art.com](http://www.lenapehoking-watershed-art.com).





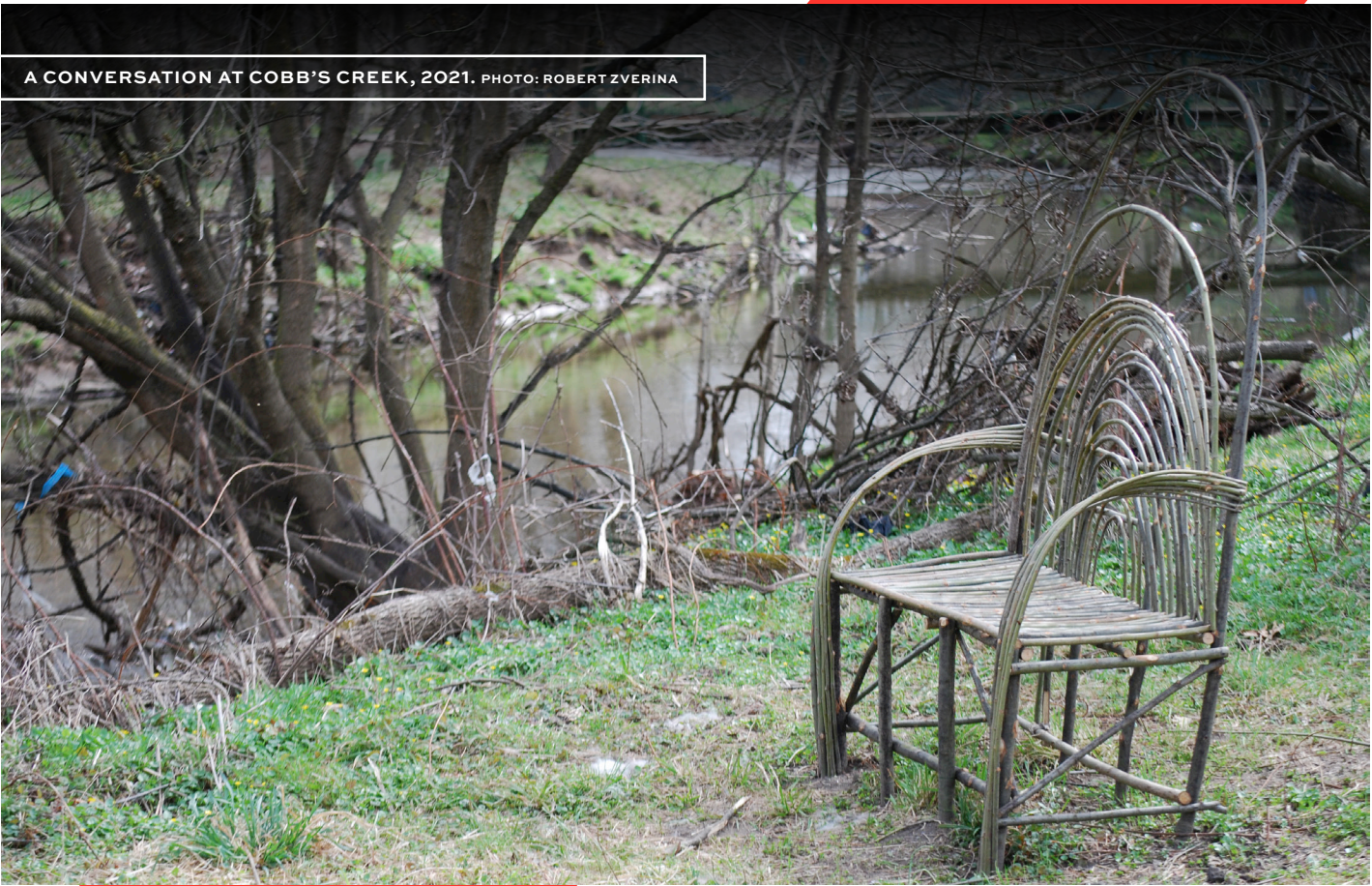




ARC IN THE BOAT BASIN  
AT THE INDEPENDENCE  
SEAPORT MUSEUM (AYMAR  
CCOPACATTY CONDUCTING  
ARC), 2021.  
PHOTO: PHOTO: ALI STEPHANIK.



MIGRATION AT HEINZ, 2021, PHOTO: SARAH KAVAGE



A CONVERSATION AT COBB'S CREEK, 2021. PHOTO: ROBERT ZVERINA



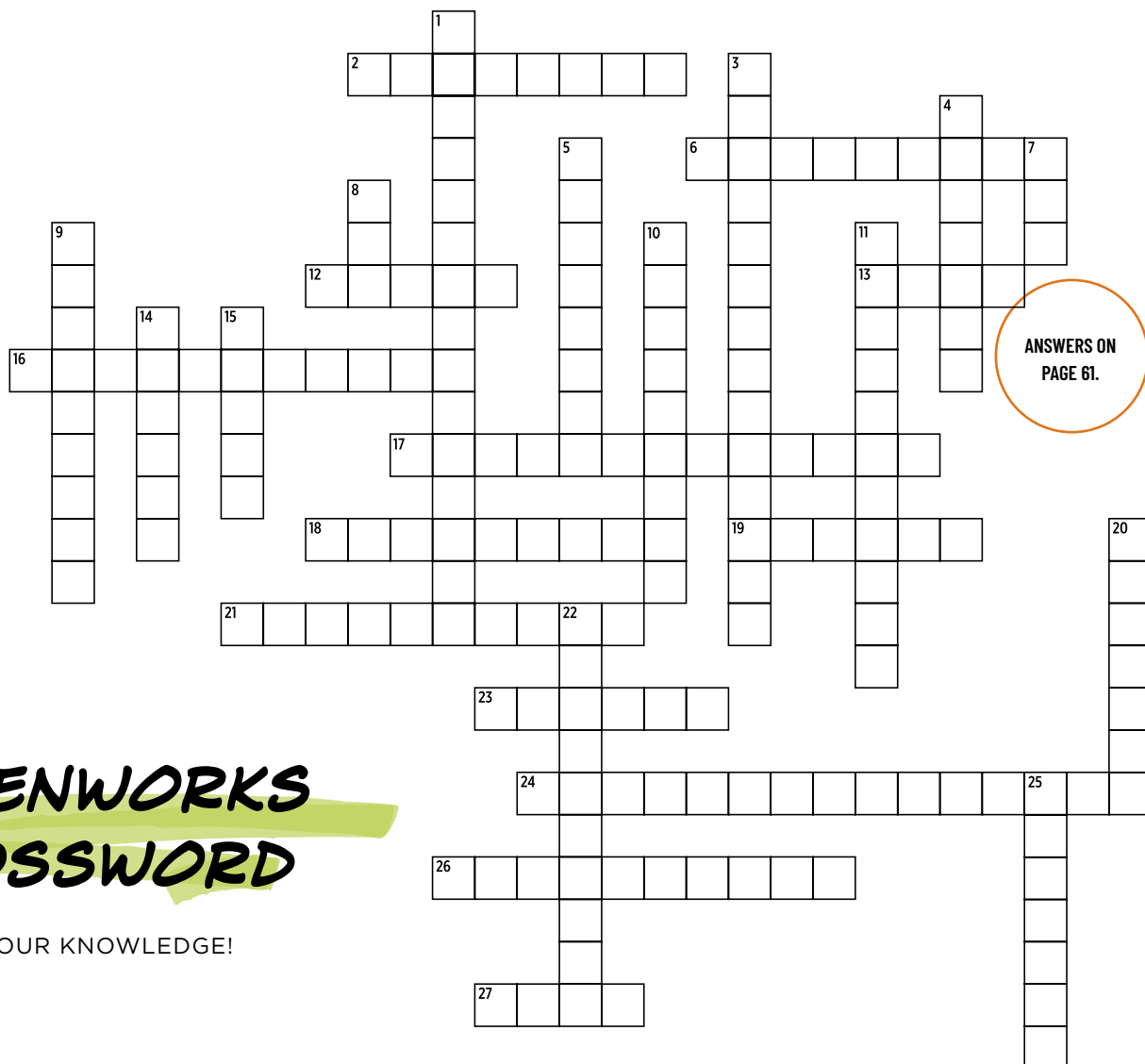
*Curbside 101*

# HOW TO SET YOUR TRASH OUT



[www.phila.gov/recycle](http://www.phila.gov/recycle)

## ACTIVITY



ANSWERS ON  
PAGE 61.

# GREENWORKS CROSSWORD

TEST YOUR KNOWLEDGE!

### ACROSS

2. One of Philadelphia's main climate risks, especially in areas like Eastwick
6. \_\_\_\_\_ Park occupies 2,052 acres (830 ha) adjacent to the banks of the Schuylkill River
12. Word preceding Accord or Hilton
13. Can be collected in barrels at home to keep sewers from overflowing
16. In 2017, Philadelphia signed on the Mayors for 100% \_\_\_\_\_ pledge
17. Popular ones in Philadelphia can be found at Headhouse Square and Clark Park
18. Globally, this accounts for 8% of carbon emissions
19. The City's popular bike-sharing system
21. Philadelphia's strategy to eliminate all traffic-related deaths and severe injuries
23. The Philadelphia \_\_\_\_\_ of Art recently completed renovations that included energy improvements to cut energy use by 20%
24. A Tesla or Chevrolet Bolt, for example
26. The City's sustainability framework
27. "I don't think I'll ever see a poem as lovely as a \_\_\_\_\_"

### DOWN

1. Around 400 of these can be found throughout Philadelphia
3. The practice of protecting a building against the elements
4. The City recently announced new members of the Environmental \_\_\_\_\_ Advisory Commission
5. \_\_\_\_\_ Philly is the largest initiative of its kind in the country, helping more than 750 homes access clean energy
7. Where to access high quality and affordable water
8. Hurricane \_\_\_\_\_ led to flooding that turned 676 into a canal
9. These are responsible for over 70% of Philadelphia's carbon emissions
10. An historic moment, or The Delaware, for Philadelphia
11. Solar installer is one of the fastest growing \_\_\_\_\_ in the country
14. Philadelphia has a goal to achieve \_\_\_\_\_ neutrality by 2050
15. The transit system that services Philadelphia and the region
20. Reduce, Reuse, \_\_\_\_\_
22. The capacity to recover quickly from hazards or disruptions
25. Decayed organic matter



# What are Natural Lands?

Philadelphia's forests, waterways, and meadows make up our natural lands. The City of Philadelphia has almost 6,000 acres of natural lands spread throughout our watershed parks (Fairmount Park, Wissahickon Valley Park, Pennypack Creek Park, Tacony Creek Park, Cobbs Creek Park, Poquessing Creek Park), and other parks like FDR Park. These areas make up 60% of our city's 10,200 acres of parkland.

The Natural Lands team is a very small but dedicated group within Philadelphia Parks & Recreation and the Fairmount Park Conservancy. They work to restore and protect our natural lands by planting native species and removing non-native and invasive species.

## Get Involved!



01

To see a forest restoration project in process, head to the Fairmount Park Horticulture Center in West Fairmount Park. You'll find trails that meander through the forest and along the grounds.

02

Volunteer with the Natural Lands team by lending a hand at a project on the second Saturday of every month. Volunteers help remove debris and invasive species, plant trees, and more.

03

Do you Love Your Park? Participate in Love Your Park cleanup days in May and November. Thousands of volunteers come out to clean, green, and celebrate more than 100 Philly parks each year.

To learn more, visit [LoveYourPark.org](http://LoveYourPark.org).

### NATURAL LANDS

The Natural Lands team works all throughout the city. They even have their own nursery in West Fairmount Park called Greenland Nursery. Each year, thousands of native plants and shrubs are propagated from seeds, then eventually planted all throughout Philadelphia's parks.

Natural lands have a huge impact on the city. They not only provide habitat for wildlife, but they create an opportunity for Philadelphians to escape into nature. Natural lands prevent erosion, provide us with clean water, purify the air we breathe, and help combat climate change.

### FOREST RESTORATION AT FAIRMOUNT PARK HORTICULTURE CENTER

The Natural Lands team recently planted more than 5,000 native trees and shrubs as part of a multi-year forest restoration project in West Fairmount Park. At the start of the project, this 30-acre forest was filled with invasive and non-native trees and plants that provided few, if any, ecological benefits to the site. The forests and Lansdowne and Montgomery creeks were also heavily degraded due to deer, erosion, and illegal dumping.

The first phase of the project involved the removal of thousands of non-native and invasive species, such as Norway Maple, Devil's Walking Stick, and invasive vines such as porcelain berry. Virtually no insects and other wildlife benefited from these species as they slowly took over the forest.

The team then planted the area with thousands of native trees and shrubs, such as oak and hickory, beech, ironwood, hornbeam, and holly, just to name a few. Not only are these species native to the area, but they're much more beneficial to insects, birds, and mammals than the non-native plants.



## Connect the Native Plant to an Animal it Supports

Did you know that native plants provide much-needed habitat to birds, mammals, and other organisms? The following native plant species can be found at the Forest Restoration site at the Fairmount Park Horticulture Center. Can you connect the native plant to the animal it supports?

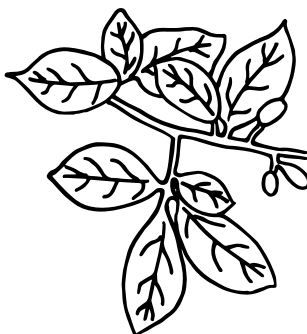
### DIRECTIONS

Draw a line to connect the native plant to the bird or mammal it sustains.

**Eastern Red Cedar**  
(*Juniperus virginiana*)



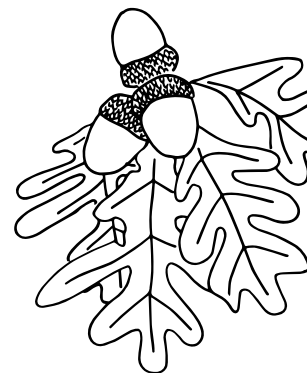
**Spicebush**  
(*Lindera benzoin*)



**Staghorn Sumac**  
(*Rhus typhina*)



**White Oak**  
(*Quercus alba*)



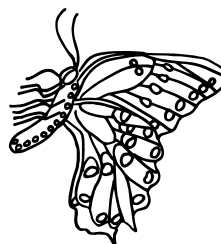
**Eastern Chipmunk**  
(*Tamias striatus*)



**Eastern Bluebirds**  
(*Sialia sialis*)



**Spicebush Swallowtail**  
(*Papilio troilus*)



**Cedar Waxwings**  
(*Bombycilla cedrorum*)



HINT!

Sometimes the name of the species can help you make the match.

**ANSWERS** 1. Staghorn Sumac (*Rhus typhina*) and Eastern Bluebirds (*Sialia sialis*) 2. Eastern Red Cedar (*Juniperus virginiana*) and Cedar Waxwings (*Bombycilla cedrorum*) 3. Spicebush (*Lindera benzoin*) and Spicebush Swallowtail (*Papilio troilus*) 4. White Oak (*Quercus alba*) and Eastern Chipmunk (*Tamias striatus*)



## Did you know that there are countless ways to get informed about the impacts of climate change?

Whether locally or globally, check out the resources below to learn more!



Image courtesy of Liz Jelsomine

### TEMPESTRY AT THE SCHUYLKILL CENTER FOR ENVIRONMENTAL EDUCATION

The Tempestry Project uses colorful knitted tapestries to show how daily temperature highs have changed over time. The project uses publicly available temperature data from the National Oceanic & Atmospheric Administration (NOAA). Forty knitters in the Philadelphia area contributed to the project. Together, the Tempestries show how Philadelphia's climate has changed from 1875 to 2018. To read the Tempestries, start at the bottom and read up for daily high temperature from January to December. Blue represents cooler temperatures and red represents hotter temperatures.

📍 8480 Hagys Mill Rd, Philadelphia, PA 19128 📞 215-482-7300  
[bit.ly/Tempestry](http://bit.ly/Tempestry)



### CHANGING EARTH AT THE FRANKLIN INSTITUTE

The Earth is always changing. In this exhibit you can learn how forces like volcanoes, storms, precipitation, and human activity shape our planet. Calculate your carbon footprint, find solutions to reduce carbon emissions, build a structure that can withstand an earthquake, deliver your own weather forecast, and more! The Franklin Institute also offers an annual climate and sustainability teacher training. Reach out to [rvalletta@fi.edu](mailto:rvalletta@fi.edu) to learn more!

📍 222 North 20th St, Philadelphia PA 19103 📞 215-448.1200  
[bit.ly/ChangingEarth](http://bit.ly/ChangingEarth)

## READ

#### CITIES OF SALT

BY ABDUL RAHMAN MUNIF

Originally written in Arabic, this book is the first of five books in a series. It discusses the transformation of the Arabian Peninsula and the discovery of oil.

#### GUN ISLAND

BY AMITOV GHOSH

This book discusses climate change, pollution, and migration. The Sundarbans, a threatened wetland between India and Bangladesh, is a focal point.

#### I'M NOT A PLASTIC BAG

BY RACHEL HOPE ALLISON

Using the Great Pacific Garbage Patch as a starting point, this graphic novel shows the impact everyday items have on the world around us.

#### PARABLE OF THE SOWER

BY OCTAVIA BUTLER

Set in the 2020s, this book details the impacts of climate change, wealth inequality, and corporate greed. It focuses on a young woman and her new belief system called Earthseed.



# WATCH

## KOYAANISQATSI: LIFE OUT OF BALANCE

The first of three movies in a series, this film strings together images and videos to show the relationships between nature and humanity.

## TAMBIEN LA LLUEVIA (EVEN THE RAIN)

Locals challenge the privatization of their water supply by a multinational corporation in Cochabamba, Bolivia.

## WB SAUL MEDIA ON YOUTUBE

Mr. Smith, one of the Natural Resource Management teachers at W.B. Saul High School of Agricultural Sciences, works with his students to create media and communications projects on environmental issues. Topics include deforestation, composting, and social justice.

[bit.ly/SaulVideos](http://bit.ly/SaulVideos)

## WHATSPOPPIN ON YOUTUBE

POPPYN stands for Presenting our Perspective on Philly Youth News. High School Students collaborate with college students to produce short films and more. Watch them live on PhillyCAM on Thursdays at 5:30.

[bit.ly/PHLYouthNews](http://bit.ly/PHLYouthNews)

Image courtesy of Bartram's Garden



# LISTEN

## CITY RISING

City Rising is a podcast by Green Philly. It shares how cities are creating climate solutions

[bit.ly/CityRisingPHL](http://bit.ly/CityRisingPHL)

## EcoWURD RADIO

EcoWURD is an environmental justice journalism initiative produced by WURD Digital. It explores the "Green Divide" and the ways Black communities are impacted at the intersections of race, income, and the environment.

<https://ecowurd.com/>

## ENERGY POLICY NOW

Energy Policy Now is a podcast series from the Kleinman Center for Energy Policy. It covers policy issues related to energy and their impact on society and the environment.

[bit.ly/EnergyPolicyPodcast](http://bit.ly/EnergyPolicyPodcast)

## PLANET PHILADELPHIA

Planet Philadelphia is a weekly environmental radio show on Germantown Community Radio. The show creates a platform for listeners to learn about and discuss environmental issues.

[bit.ly/PlanetPhila](http://bit.ly/PlanetPhila)

## PHILLY TALKS CLIMATE

Philly Talks Climate is a radio show about the climate crisis and how it affects Philadelphia.

[bit.ly/TalkClimatePHL](http://bit.ly/TalkClimatePHL)

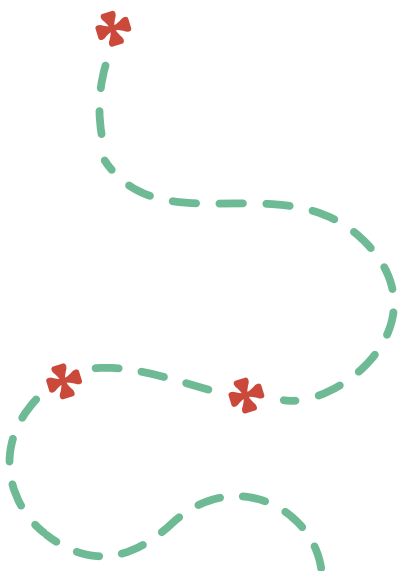
## STORIES FROM HOME: LIVING THE JUST TRANSITION

The first podcast series by the Climate Justice Alliance, it focuses on the valuable climate justice work of everyday people.

<http://bit.ly/CJApodcast>

## PHILLY ENVIRONMENTAL CENTERS & FARMS

- 1. Bartram's Garden**  
5400 Lindbergh Blvd  
Philadelphia, PA 19143
- 2. Cobbs Creek Community Environmental Center**  
700 Cobbs Creek Parkway  
Philadelphia, PA 19143
- 3. The Discovery Center**  
3401 Reservoir Drive  
Philadelphia, PA 19121
- 4. Fairmount Park Horticultural Center**  
100 N Horticultural Drive  
Philadelphia, PA 19131
- 5. Fairmount Water Works**  
640 Waterworks Drive  
Philadelphia, PA 19130
- 6. John Heinz National Wildlife Refuge at Tinicum**  
8601 Lindbergh Boulevard  
Philadelphia, PA 19153
- 7. One Art Community Center**  
1431-39 N. 52nd Street  
Philadelphia, PA 19131
- 8. Overbrook Environmental Education Center**  
134 Lancaster Avenue  
Philadelphia, PA 19151
- 9. Urban Creator's Life Do Grow Farm**  
2315 N. 11th Street  
Philadelphia, PA 19133
- 10. Wissahickon Environmental Center**  
300 W. Northwestern Avenue  
Philadelphia, PA 19128



# PHILADELPHIA STREETS RECYCLING GUIDE

Recycling must be put out in bins labeled **RECYCLING**.

For info on your trash and recycling pickup day, visit [phila.gov/recycling](http://phila.gov/recycling)

## PUT THESE IN (EMPTIED, RINSED, DRY)

### PAPER

remove from plastic sleeves/bags

- Newspapers and inserts
- Magazines, brochures, and catalogs
- Junk mail, envelopes, writing paper
- Scrap paper
- Paper bags
- Phone books
- Paperback books (no hardbacks)
- Greeting cards, gift wrap (non-metallic)



### PLASTICS #1, #2, #5

emptied, lids and caps on

- All food and beverage containers
- Hard plastic takeout containers
- Detergent and shampoo bottles
- Pump and spray bottles
- Plastic bottles & jugs



### METALS

emptied, lids and caps on

- Aluminum, steel, and tin cans
- Empty paint cans
- Empty aerosol cans
- Aluminum or steel baking trays/dishes
- Jar lids and bottle caps on empty containers



### CARTONS

emptied

- Milk
- Juice
- Wine
- Soup



### CARDBOARD

flattened and free of grease and food

- Corrugated cardboard shipping boxes
- Clean (not greasy) pizza boxes
- Paper towel rolls
- Egg cartons (cardboard only)
- Dry food boxes



### GLASS

emptied, lids and caps on

- All bottles and jars



## KEEP THESE OUT

**NO PLASTIC BAGS  
DO NOT BAG YOUR  
RECYCLABLES**

- Food & Food-Soiled Materials
- Disposable Plates, Cups & Takeout Containers
- Greasy or Food-Soiled Paper & Cardboard
- Styrofoam™
- Batteries & Electronics
- Needles & Syringes
- Clothing Hangers
- Tissues, Paper Towels & Napkins
- Pots, Pans & Ceramics
- Wood
- Plastic Bags
- Shredded Paper

**TAKE A MINUTE BEFORE YOU BIN IT, WHEN IN DOUBT KEEP IT OUT.**

## SANITATION CONVENIENCE CENTERS

SIX CONVENIENT LOCATIONS. ZERO EXCUSE FOR ILLEGAL DUMPING.

**West Philadelphia**  
5100 Grays Ave.  
215-685-2600

**Southwest Philadelphia**  
3033 S. 63rd St.,  
near Passyunk Ave.  
215-685-4290

**Strawberry Mansion**  
2601 W. Glenwood Ave.  
215-685-3981

**Northwest Philadelphia**  
300 block Domino Lane,  
near Umbria St.  
215-685-2502

**Port Richmond**  
3901 Delaware Ave.  
215-685-1358

**Northeast Philadelphia**  
State Rd. & Ashburner St.  
215-685-8072

### HOURS:

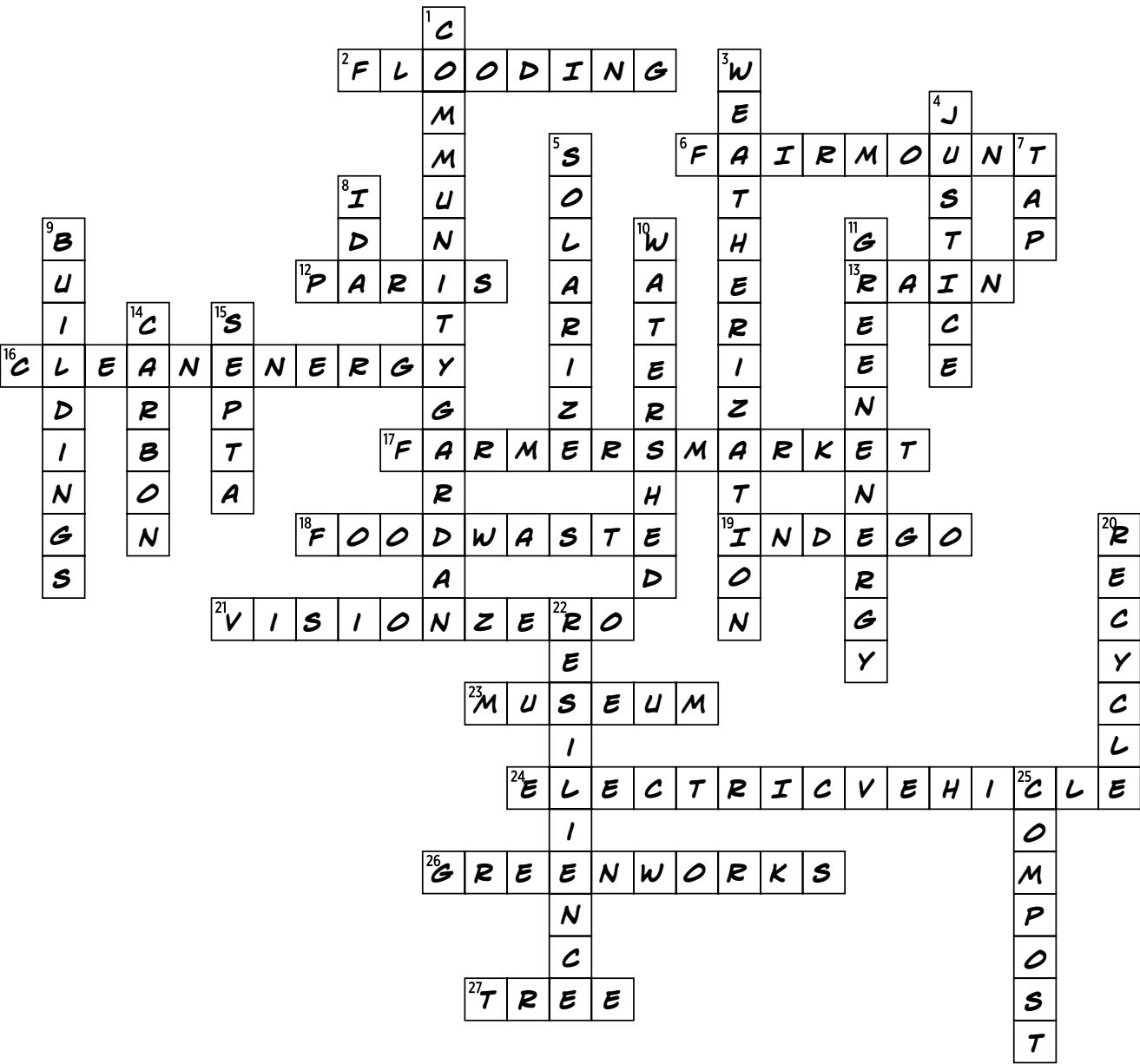
**MONDAY - SATURDAY**  
8am - 6pm



V2- 09/2021

ACTIVITY

ANSWERS FROM CROSSWORD PUZZLE ON PAGE 55.







[www.phila.gov/green](http://www.phila.gov/green)

**Stay  
Social!**



@greenworkspbila

RESIDENTS:

*Free*  
**Rain Barrel!**  
**Protect local  
waterways.**



Sign up for a workshop:  
[pwdraincheck.org](http://pwdraincheck.org)

PHILADELPHIA  
**WATER**  
— DEPARTMENT —

