



Donovan Richards Jr.
QUEENS BOROUGH PRESIDENT



Operation Urban Sustainability Report

Issued April 2023

EXECUTIVE STATEMENT

To understand the solution we must first identify the problem

With the passage of the New York State Climate Leadership and Community Protection Act (CLCPA), the federal Inflation Reduction Act (IRA) and the Environmental Bond Act, billions of dollars of funding are available for nonprofit organizations, academic institutions and the general public for sustainable initiatives. In May 2022, Queens Borough President Donovan Richards convened “Operation: Urban Sustainability” (OUS) as a taskforce to identify key projects and funding opportunities, and inspire other municipalities to do the same.

Our goals were simple: determine and prioritize sustainability and resiliency issues; set objectives with subject matter experts for tangible projects; and aggregate as much city, state and federal information regarding sustainable programs, initiatives and grant funding as possible. We generate this report with the lens of environmental justice: Queens will put those at the table who have been historically left out of land use and environmental remediation conversations.

Queens Borough President Donovan Richards Jr, alongside Council Member Lincoln Restler, is also leading the way as a co-sponsor of [Resolution 169](#): Climate Action Council to draft, and the Governor to implement, a final Climate Action Council Scoping Plan that commits to meeting CLCPA targets and bold climate and environmental justice action in New York.

Introduction

This work was only made possible by the organizations that volunteered their time and effort to draft this report:

34th Avenue Open Street Coalition	New York Lawyers for the Public Interest	River Keeper
Alley Pond Park Environmental Center	Newtown Creek Alliance	Sierra Club
The Campaign Against Hunger	NYC Department of Environmental Protection	Smiling Hogshead Ranch
Center for Urban Environmental Reform	NYC Department of Parks and Recreation	Stony Brook University
Climate Jobs NY	NYC Department of Transportation	Surfrider Foundation NYC
Cornell University	NYC Mayor’s Community Affairs Unit	The Hope Program
Council Member Shekar Krishnan	Open Plans	The New York City Compost Project Hosted by Big Reuse
Dutch Kills Loop	Pop Up Forest	Transportation Alternatives
Eastern Queens Alliance	Queens Climate Project	Urban Green Council
Guardians of Flushing Bay	Queens College	Urban Justice
Forest Hills Green Team	Queens Farm	Waterfront Alliance
Jackson Heights Green Alliance	Queens Solid Waste Advisory Board	Woods Hole Oceanographic Institution and Coastal Preservation Network
Jamaica Bay-Rockaway Parks Conservancy	Renewable Rikers Coalition, Justice Catalyst Law	Woodside on The Move
Neighborhood Housing Services of Queens	Riders Alliance	

OUS Working Groups

- **Food, Composting, and Urban Agriculture**
- **Energy Systems and Buildings**
- **Environmental Justice, Education, and Outreach**
- **Flooding Resiliency, Nature, and Ecosystems**
- **Transportation and Walkability**

OUS met virtually once a month over the past year. The meetings were a mix of presentations on topical issues and breakout rooms for each working group. From December 2022 through February 2023, working group members put together their priorities for Queens. This report is an accumulation of their knowledge, expertise and insight. Because each working group had different

recommendations, we should note that some sections broke out projects by category (capital, legislative, informational, etc.) while others simply listed their projects with the goal of stimulating creativity in how their goals could be met.

As part of our research, OUS also looked at the [14 Queens Community Boards’ Community Profiles](#) and a new [“Spatial Equity” online portal](#) that ranks each council district in terms of transportation access, green space, asthma rates, and other factors. The current Queens urban landscape shows a divided borough – with two large airports, multiple highways and limited subway access in the east, many neighborhoods are bearing the brunt of climate change.



Letter from the Borough President

From the destruction caused by Hurricanes Sandy and Ida to the disparate health impacts families living in Astoria’s “Asthma Alley” have suffered for generations, Queens knows all too well the devastation, both seen and unseen, that climate change and unchecked fossil fuel combustion can cause. Each has claimed the lives of too many in The World’s Borough, and we must act with supreme urgency to reduce carbon emissions and

lessen the toll these human-influenced disasters are taking on Queens.

Buildings are the largest source of emissions in New York — 32 percent of emissions produced statewide come from actions like burning fossil fuels in residential and commercial buildings for heating, cooling and hot water, as well as emissions of hydrofluorocarbons (HFCs) from insulation and building materials.

By 2050, almost every building in New York State must rely primarily on electricity for heating and cooling, which can mostly be done by replacing polluting

appliances and heating systems at the end of their natural lifespan.

There are massive public health benefits from electrifying our everyday heating systems, including reducing the potential for carbon monoxide poisoning, reducing nitrogen oxides and creating a more comfortable living environment. But we have to make sure low- to moderate-income homeowners and tenants aren’t footing the full costs of this transition. They need and deserve support through this process, which is why we support a quadrupling of the existing state investment in housing improvements.

The state must also quickly develop plans to retire and replace current fossil fuel plants, while providing funding and support for workers affected by this transition as well as the communities surrounding these plants. At the same time, my office wholly supports setting a year-by-year target for permitting new wind, solar, and battery storage, along with its commitment to tear down barriers to large-scale renewable energy siting.

This substantial investment in our clean energy efforts requires full staffing of relevant state agencies, including the Office of Renewable Energy Siting, and a comprehensive public education and information push on the benefits and opportunities of clean energy.

In terms of what the New York State Department of Environmental Conservation (DEC) can do, Hurricane Ida’s impacts and those of other storms elsewhere in the state should drive us to develop a statewide flood-risk mapping strategy, along with a regulatory program to ensure protection of stream buffers to protect and enhance water and habitat quality, reduce flood risk and prevent soil erosion.

On waste treatment, we must incentivize public-private partnerships for organics recycling facility development.

Let’s ensure consistent and sufficient levels of funding, staff, and technical support for waste reduction, reuse, and recycling programs.

Let’s develop additional infrastructure to collect and recycle materials for EPR implementation. Strong paper



and packaging extended producer responsibility should be a priority for addressing emissions from the waste sector.

Let’s create a strategy on extended producer responsibility for refrigerant-containing appliances. Enforcement may be challenging due to the large number of facilities managing these end-of-life appliances and the lack of comprehensive disposal data.

When it comes to the state government, let’s make sure we’re adequately funding organics recycling infrastructure and setting standards for maintenance of anaerobic digesters to avoid methane leaks.

The benefits of investing in clean energy are also economic, as climate action will prove to be a massive job creator in the industries of tomorrow. By 2030, estimates predict a net increase of nearly 200,000 jobs thanks to the various climate laws passed in recent years.

Before our working groups came to their findings, we synthesized existing data to figure out the baseline issues in Queens.

Sincerely,

Donovan Richards Jr.
Queens Borough President



WORKING GROUP FINDINGS AND RECOMMENDATIONS

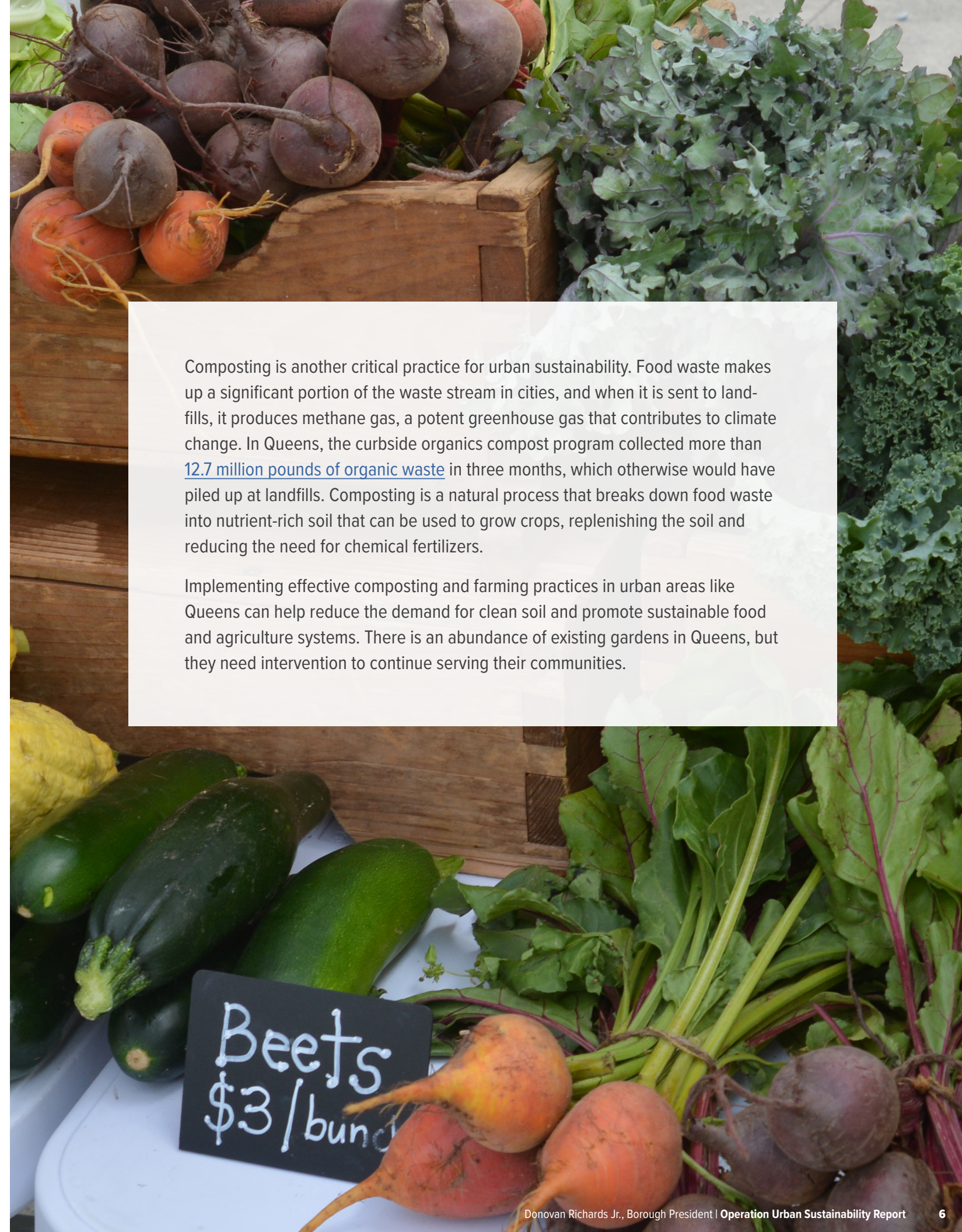
Food, Composting and Urban Agriculture

Nearly 275,000 of our neighbors in Queens are food insecure — approximately [12 percent of our population](#). To address this underreported yet damaging crisis, implementing effective food recovery, composting and farming practices in urban areas is crucial for achieving long-term sustainability in food and agriculture. We intend to make Queens a national model of urban agriculture by prioritizing the NYC Department of Parks and Recreation (NYC Parks) GreenThumb, and GrowNYC, nonprofits like Queens County Farm and the Queens Botanical Garden Urban Farm, which donates produce to local food pantries, to address food insecurity in the community. The Queens Borough President’s Office, with numerous organizations involved in OUS, has also led the way for a permanent citywide composting program.

Food recovery is of the utmost importance as land, labor, fuel, and other resources have been used to grow, transport, package, sell and prepare food in NYC. Yet thousands of New Yorkers remain hungry while bakeries,

restaurants, grocery stores and other food producing businesses throw away edible food everyday. In New York, [3.9 million tons of food waste](#) end up in landfills annually. We must prioritize rescuing and recovering the energy, time, and resources this food waste represents in order to feed people and move our city towards a just and equitable urban food system.

As cities continue to grow and expand, the amount of available land for agriculture decreases. Food rescue reduces the burden on farmers while urban farming allows for the cultivation of crops and production of food within the limits, reducing transportation emissions and promoting local food systems. Additionally, urban farming can provide opportunities for education and community-building, as well as improving food security for vulnerable populations. In order to achieve these goals, we must ensure food grown in low income areas remains in these communities and is affordable and accessible to the residents who need it most.



Composting is another critical practice for urban sustainability. Food waste makes up a significant portion of the waste stream in cities, and when it is sent to landfills, it produces methane gas, a potent greenhouse gas that contributes to climate change. In Queens, the curbside organics compost program collected more than [12.7 million pounds of organic waste](#) in three months, which otherwise would have piled up at landfills. Composting is a natural process that breaks down food waste into nutrient-rich soil that can be used to grow crops, replenishing the soil and reducing the need for chemical fertilizers.

Implementing effective composting and farming practices in urban areas like Queens can help reduce the demand for clean soil and promote sustainable food and agriculture systems. There is an abundance of existing gardens in Queens, but they need intervention to continue serving their communities.

POTENTIAL PROJECTS

The following section was compiled by Queens Community Board 4.

Sparrow's Nest Community Garden (54-01 101st Street) is located adjacent to Louis Simeone Park in Corona, where it relocated in 2015. Home to egg-laying chickens, quails, beehives, and exotic crops, the garden, which runs entirely on renewable energy, was established and is currently maintained by Pastor Ochil Kwon through funding from his Flushing-based church. The community garden serves dozens of seniors in the area, providing them with recreation time and healthy sustenance. This garden has and will continue to host field trips and teach students about healthy eating, being environmentally conscious and other essential skills. Though it is vital to the local ecosystem, there are issues that can be solved with the right organizing and funding:

- Due to soft topsoil, flooding issues along the main entrance prevents effective drainage. A solid path construction around the garden and underground drainage system would alleviate the effects of flooding.
- Solar panels have been damaged or stolen by vandalism or theft. More solar panels (approximately 4-5 panels at 100 megawatts each) and batteries for security cameras are needed.
- Without proper heat and moisture management, honey-producing bees pass away during the cold weather months. Weathering covers would improve their conditions, given that an average order of bees can cost between \$106 and \$200.
- Rodents can be a nuisance in the garden. Assistance with rat mitigation (traps, etc.) would help.
- This garden does not have access to onsite water. With hydrant access approximately 50 feet away from the Sparrow's Nest, we hope we can work with the city to connect to the water system.

Peach Tree Garden, formerly the "Corona Tax Payer's Garden" (52-02 102nd Street), in Louis Simeone Park has served the community for over 40 years. It has been under strict maintenance by John Mattei, a long-time

community resident and close friend of Community Board 4. Areas for improvement include:

- An infrastructural upgrade via pipes directly connecting it to the park's water supply or an independent, more sustainable internal water source. Currently, the garden must tap directly into the local park's water supply or request the use of the adjacent fire hydrant approx 100 feet away.
- This garden suffers from occasional vandalism. The garden needs better lighting, motion sensors and security cameras.
- Two to three solar (100W) panels and batteries would provide better security and assist with the cost of cameras, motion sensors, lighting, and water-pumping mechanisms.
- The ground needs more infrastructure stability. Concrete pavers and cobblestone paths are better to provide a means for garden tours and field trips safely.
- The garden makes its compost and shares it with the local community. An additional small compost bin is needed.

Compost-a-looza at Queens Botanical Gardens is a spectacular opportunity to engage and educate the community with master composters and resources for all ages. For a low cost, families and individuals can learn more about [how composting works](#). Through more planning and monetary capacity, it would be a huge win for Queens if this event was expanded to occur over multiple months in the year.

Queens County Farm Museum (QCFM) celebrates its 325th anniversary of farming, and has begun the largest agricultural expansion in over 50 years on its 47-acre regenerative farm. The organization has strategically built capacity over the last five years. Here are the next

steps of that expansion that OUS can support to immediately expand urban agriculture in Queens to serve thousands of residents by growing more food:

- QCFM has the ability to add an additional 5+ acres into production to grow more food on Queens Farm's historic farmland. Currently, the Little Neck Douglaston Soccer Club uses part of Queens County Farm Museum's historic farmland for soccer. The club is interested in improved fields in a different location (since the ones at QCFM are not ideal). With help and a commitment to relocate the soccer club, Queens Farm can grow an additional 100,000 pounds to feed New Yorkers.
- QCFM would like to baseline its City funding to support its public work. Whether through the Conservation Innovation Grant (CIG) model or another city partnership model, securing baseline funding will fortify Queens County Farm Museum as the City grows environmental stewardship, urban agriculture, food security & justice, and public education & enrichment.

Queens County Farm Museum uniquely serves New York City. There is no other cultural nonprofit doing the work on the scope and scale as Queens County Farm Museum, representing the intersection of agriculture, STEM, cultural programming & education and urban agriculture workforce development. A permanent investment in QCFM and the ability to maximize the historic farmland for the good of New York is a plan where everyone wins.

Ongoing Communication with DSNY, Parks and DCAS.

The Queens Borough President's Office and OUS commit to being an active partner and sponsor in future years to help promote the activities and proliferate composting throughout the borough, as well as fostering open dialogue between volunteer composting groups and NYC Parks:

- Multiple nonprofits have their own spaces for composting and/or urban farming. OUS will help nonprofits start or expand food recovery and redistribution programs, composting and urban farming sites and facilitate communication between new and existing

groups as well as any relevant city agencies (DSNY, Parks, DCAS, etc.) to ensure they can work successfully.

- The City should consider funding (through grants, universities, or subsidized leasing) any city-owned "sliver" lots that might be located near other institutions.
- NYC Parks should also explore smaller-scale remediation projects to allow for safer composting on sections of unused public land.
- Parks should partner with the NYC Department of Sanitation (DSNY) Compost Project hosted by Big Reuse to preserve the compost processing site located on Park's land under the Queensboro Bridge in Long Island City. In 2020 the US Compost Council acknowledged this site with the "Compost Manufacturer of the Year Award (Small Scale)" (<10,000 tons per year throughput) for excellence in both compost production and distribution.
- Create and facilitate community composting and recycling hubs in each sanitation district.
- The City should facilitate NYCHA composting and recycling through education and support services. NYCHA and composters should create micro pick-ups between buildings. OUS could act as a liaison to track current issues.





Energy Systems and Buildings

To make a significant cut in carbon emissions, Queens must transform the built environment to be cleaner and more efficient. In New York City, [70 percent of emissions](#) come from buildings. This is in large part due to aging, inefficient infrastructure and dependency on fossil fuels to keep the lights running and the building warm.

In Queens, there are thousands of buildings that need to be upgraded. In 2019, Queens had over 7,500 unique buildings either city-owned (over 10,000 square feet) or private (over 25,000 square feet) that are required

to comply with Local Law 97. These buildings alone released over [3 million tons of carbon dioxide](#), equivalent to [646,000 gasoline cars](#) on the road for a year. On average, these buildings were constructed 65 years ago, with the majority running on fuel oil or natural gas for heating.

Moving towards cleaner and more efficient buildings will reduce energy burdens on Queens residents. In 2017, [over a quarter of Queens residents](#) paid over 6 percent of their income on energy bills. Reliance on oil and gas – a highly variable and fluctuating energy source – creates financial insecurity for residents who are trying to save and plan for the future.

There are three steps for NYC buildings to become net-zero and resilient: 1) conduct deep energy efficiency retrofits to reduce energy use as much as possible 2) install on-site renewables such as solar panels to meet remaining energy needs and 3) install a backup energy source, such as battery storage, as a resilience measure in the case of extreme events.

Bringing thousands of Queens buildings up to 21st century building standards is a massive undertaking that will require thousands of new, highly skilled workers. The work can range from upgrading piping, wiring, insulation, building envelopes to prevent energy or water leakage to installing heat pumps and solar panels. Unions are set up to provide apprentice-

ships that offer good pay, benefits, health insurance, retirement, childcare and more from day one. These are high-quality career paths that should go to Queens residents from frontline communities that are most impacted by climate change.

Bold commitments and action to radically updating our buildings at scale is a huge opportunity for Queens. With the passage of Local Law 97 and the creation of NYC Accelerator, there is momentum towards meaningful change. We can reduce emissions, lower energy burden, improve our air quality, increase resilience and create high-quality jobs, all at the same time. This section has a set of recommendations for the City developed by our team.

POTENTIAL PROJECTS

Introduce new Queens Borough President Land Use Rubric for City and State Projects

This Rubric was made after reviewing existing Local Laws, CEQR requirements, and citywide policy recommendations in order to produce an all-encompassing land use rationale for new projects in Queens. Broken down by the five working-group categories of this report and each proposed rezoning district (Manufacturing, Residential and Commercial), any developer should hope to check all of these items (depending on their project) to receive the Borough

President’s unequivocal support. In applications where a mixed-use development is proposed, the developer should check off all appropriate boxes per the zoning districts (i.e., Residential Area with a Commercial Overlay would entail checking off both “Residential” and “Commercial” items). For State projects, such as a General Project Plan (GPP), these guidelines should be used to the best of their ability, based on the development’s projected use.

Please visit the Department of City Planning’s (DCP) website to look up the [different zoning districts](#) referenced in the rubric.

CATEGORIES	MANUFACTURING	RESIDENTIAL	COMMERCIAL
Food, Composting and Agriculture	<ul style="list-style-type: none"> Space set-aside easement agreement for local composting group storage. 	<ul style="list-style-type: none"> If R5 and above, set aside space for a community garden on the ground floor or publicly accessible floor in the building. Composting chutes and bins (to be maintained by landlord) Agreement with nearby composting nonprofit to drop off compost 	<ul style="list-style-type: none"> Set aside for food co-ops / pantry operators that work with urban agriculture / community garden groups. If no set-aside available, commercial use should consider an onsite composting system and partner with a nonprofit to drop off or coordinate pick-up.
Energy Systems and Buildings	<ul style="list-style-type: none"> LEED O+M: Industrial-certified (with option to go Silver, Gold or Platinum). Air quality control. 	<ul style="list-style-type: none"> if R7 and above, seek Geothermal NYSERDA grant. if R6 and below, LEED-certified (with option to go Silver, Gold or Platinum). All residential: Passive House model. 	<ul style="list-style-type: none"> if C4 and above, seek Geothermal NYSERDA grant. if C3 and below, LEED-certified (with option to go Silver, Gold or Platinum). Air quality control.
Resiliency and Flooding	<ul style="list-style-type: none"> Permeable pavement. Green roof. Rain gardens along the property line by sidewalk. WEDG certification if by waterfront. 	<ul style="list-style-type: none"> Permeable pavement. Green roof. Rain gardens along the property line by sidewalk. Consider dry- or wet-proofing basement even if outside the floodplain. WEDG certification if by waterfront. 	<ul style="list-style-type: none"> Permeable pavement. Green roof. Rain gardens along the property line by sidewalk. Consider dry- or wet-proofing basement even if outside the floodplain. WEDG certification if by waterfront.

CATEGORIES	MANUFACTURING	RESIDENTIAL	COMMERCIAL
Transportation and Walkability	<ul style="list-style-type: none"> Bike parking for employees. Well-identified curb cuts for loading. Bike lanes around the perimeter of property that connect to the main network. EV chargers at 50% of mandated parking spaces. 	<ul style="list-style-type: none"> Expanded bike parking outside and in the basement with locked doors. Separate, fire-safe area for battery-powered vehicles. Contribute to capital improvements such as pedestrian crossings and bike lanes in the immediate area. EV chargers at 50% of mandated parking spaces. 	<ul style="list-style-type: none"> Maintained bike parking for employees and patrons. Separate, fire-safe area for battery-powered vehicles. Contribute to capital improvements such as pedestrian crossings and bike lanes in the immediate area. EV chargers at 50% of mandated parking spaces.
Environmental Justice	<ul style="list-style-type: none"> MWBE hiring at 30-50%. Targeted community outreach (with language and cultural competency) to nearby residents about construction and truck usage. 50% EV Freight Fleet. Local hiring 30-50%. Educational/internship opportunities for youth/young adults. If M1, set aside for community facility space based on local need in CB (healthcare, after-school, etc). Contribute to capital improvements to nearby schools, playgrounds, parks and/or NYCHA developments (if within 600 ft of the development site). 	<ul style="list-style-type: none"> Affordable housing should be above the mandated set-aside for any project that generates an RER report (as per DCP); Option 1 should always be utilized. Set-aside for HPD’s ELLA and/or SARA programs if MIH floor cannot be exceeded. MWBE hiring at 30-50%. Targeted community outreach (with language and cultural competency) to nearby residents about construction and benefits, or new/existing use (if about compliance). Local art/historic display in lobby about culturally significant event(s) as chosen by the CB. Set aside for community facility space based on both tenant meeting space and local need in CB (healthcare, after-school, etc). Contribute to capital improvements to nearby schools, playgrounds, parks and/or NYCHA developments (if within 600 ft of the development site). 	<ul style="list-style-type: none"> Consider partnering with a company to create a resting space for delivery workers, to be used by a number of surrounding businesses. Targeted community outreach (with language and cultural competency) to nearby residents about construction and benefits, or new/existing use (if about compliance). Local hiring 30-50%. If C4 and below, set aside for community facility space based on local need in CB (healthcare, after-school, etc). Educational/internship opportunities for youth/young adults. Contribute to capital improvements to nearby schools, playgrounds, parks and/or NYCHA developments (if within 600 ft of the development site).

Collaborate more significantly with the Mayor’s Office of Climate and Environmental Justice (MOCEJ).

There are myriad city and state agencies that do important work throughout the borough. Through the Queens Borough President’s Office, OUS is in a unique position to work closely with MOCEJ, which develops and disseminates sustainable practices for the City. This working group recommends that QBPO works most closely with the Mayor’s office on:

- NYC Accelerator is a program designed to help the general public to manage the entire permitting process, rent out space on the building owner’s roof/home for solar or alternative energy sources, negotiate a lower electricity cost, and be responsible for contracting out union labor for installations of solar panels, heat pumps, green roofs, and more at no cost to the building or homeowner. Homeowners who want to own panels/retrofits can use [PACE Financing](#) and pay with cost savings or no-interest financing.
- Advising building owners, helping them understand how to do retrofits, and encouraging them to identify a neighborhood for “energy bundling” improvements through their NYC Accelerator program.
- While much of this assistance is geared toward building owners, there should also be a separate arm of this program that specifically works with condo and co-op owners. As shareholders in their buildings (or renters in a co-op building), there should be a clear set of guidelines for them to work with their Board and management company to coordinate retrofits and other energy-efficient improvements.

QBPO Renewable Energy Tour. The Borough President’s Office could organize a tour to highlight solar power, battery installations, heat pump installations and other decarbonization projects throughout Queens. The goal would be to encourage other nonprofit organizations, public agencies, and even the general public to implement some of these measures as well.

Here are some ideas for field trips to notable Queens projects or future endeavors:

- Queens Botanical Garden’s [Green Roof](#).
- [Queensbridge NYCHA solar projects](#) which were installed by NYCHA residents.
- Queens schools to demonstrate [large solar installations and workforce development opportunities](#).
- Long Island City Farm operated by [Brooklyn Grange](#).
- Arverne East in the Rockaways, which will be the [first net-zero development in the City](#) through their acceptance of the NYSERDA Geothermal grant.
- “Queens is Still the Future” solar installation at Flushing Corona Park.
- Shipping containers converted to “model homes” or charging stations.
- Solar kiosks.
- Energy Fairs.

Dedicated “clearinghouse” on the QBPO website for programs, links and opportunities.

In-person visits are crucial for spreading awareness about existing city programs and initiatives, but often when New Yorkers use the Internet to research these programs, they may feel overwhelmed by the question: “Where to start?” The QBPO website could be a landing page with guidelines for beginners with respect to NYC Accelerator, sustainability-related events throughout the Borough, and grant opportunities at the state and city level.

For example, one of our OUS members at Neighborhood Housing Services (NHS) reported that they saw the great impact of heat pump installations on their clients’ financial and overall well-being, especially in the aftermath of Hurricane Ida. Spreading the word about [NYSERDA’s Community Heat Pump Pilot Program](#), and connecting constituents to nonprofits who could help with the grant application, would solve the current issue and alleviate stress for future storms and hurricanes.



City commitment to retrofitting all Queens public buildings to become net-zero

In 2019, [NYC began recording and publicly displaying](#) “Energy Grades” on city-owned buildings, ranging from A (the best energy rating) to F (the worst rating). Three years later, The City reported that [nearly half of these buildings earned Ds or Fs](#) as their Energy Grades. Though we cannot underestimate the impact COVID-19 had on New York City between 2019 and 2021, it is clear that our City cannot afford to lag behind – it must lead by example.

Edgemere Landfill Solar Farm. The Edgemere landfill in Queens should be turned into a solar farm. There are several reasons why this would be a beneficial and innovative solution:

- *Clean energy production:* A solar farm on the site of the former landfill would generate clean energy from a renewable source, reducing our reliance on fossil fuels and helping to combat climate change.
- *Land use:* Landfills are often viewed as unusable and unproductive spaces, but a solar farm would transform the site into a beneficial and productive use of land. This is a sustainable way to repurpose a formerly contaminated site for the benefit of the local community and the environment.
- *Economic benefits:* The construction of a solar farm would provide economic benefits to the community

by creating jobs and generating revenue for the local economy. In addition, solar power is becoming increasingly cost-competitive with fossil fuels, meaning that the solar farm could potentially save the city money on energy costs in the long run.

- *Environmental benefits:* Solar farms have a minimal environmental impact compared to other types of energy production. They produce no emissions or pollution, do not use water resources, and have minimal land disturbance.
- *Community benefits:* A solar farm on the site of the Edgemere landfill would also have community benefits, providing educational opportunities and promoting awareness of clean energy solutions. The solar farm could also provide energy access and cost savings to local residents.

Renewable Rikers. Situated between three boroughs and five peaker plants, Rikers Island could transform its horrible legacy by becoming an [“infrastructure nexus”](#) for renewable energy. The Regional Planning Association (RPA) put out a report in November 2022 detailing their vision for composting, solar, wastewater resource recovery, anaerobic digesters, waste transfer stations and research institute on the Island, once the jail complex is demolished. The plan would also include resiliency measures such as coastal buffers and natural landscaping to prevent flooding. OUS believes this is the best use of Rikers Island. Much like the Edgemere

Landfill Solar Farm project, Renewable Rikers would create numerous jobs, educational opportunities and reduce NYC's carbon footprint immensely. Ideally this shift to new energy systems would discontinue Astoria's infamous peaker plants and connect Rikers to the Bureau of Ocean Energy Management's Off-Shore Beacon Wind Project. When complete, the off-shore wind project is estimated to provide [1,230 megawatts \(MW\) of offshore wind power](#) for households throughout the Northeast United States.

Another important aspect of the Renewable Rikers proposal is the creation of green jobs. The report recommends that renewable energy infrastructure projects on Rikers Island and the surrounding communities should prioritize hiring justice-impacted individuals and individuals from front-line communities. This would not only provide employment opportunities for those who may have difficulty finding work due to their past involvement in the criminal justice system, but it would also ensure that the benefits of renewable energy investments are shared equitably.

Finally, the report emphasizes the importance of involving community-based organizations (CBOs) in the development and implementation of renewable energy projects. CBOs are community-driven organizations that have a deep understanding of the needs and concerns of local residents. By involving CBOs in the planning and implementation of renewable energy projects, the report suggests that the projects can be better tailored to the specific needs and priorities of the community, and can be more effective in addressing issues of social and environmental justice.

Additional Dwelling Units. Queens needs an aggressive plan to address the affordable housing crisis and climate change. As we continue to mourn for our neighbors we lost in Hurricanes Ida and Henri, we also strongly advocate for the legalization of Accessory Dwelling Units ("ADUs") – we can not help Queens residents if we do not know where they are. There are several compelling reasons to support the legalization of ADUs in New York City:

- *Addressing the affordable housing crisis:* New York City is facing an affordable housing crisis, with a shortage of affordable units and a rapidly increasing population. Legalizing ADUs would allow homeowners to create additional units on their properties, increasing the overall supply of housing and providing more affordable options for renters.
- *Promoting intergenerational living:* ADUs can provide a way for families to live together across generations, which can have benefits for both older adults and younger family members. Older adults can age in place and maintain independence while still having family nearby for support, while younger family members can benefit from the financial and social support of living with family.
- *Supporting small business and entrepreneurship:* Legalizing ADUs can also provide opportunities for small business and entrepreneurship, as homeowners can create rental units or short-term rentals that generate income. This can be particularly beneficial for lower-income homeowners or those who may be struggling to make ends meet.
- *Promoting community and diversity:* ADUs can also contribute to more diverse and vibrant communities by allowing for a greater mix of housing types and residents. This can promote greater social cohesion and create more inclusive and welcoming neighborhoods.

Create a Consumer Bill of Rights. As the resilient energy sector grows, it is important to acknowledge that bad actors may take advantage of climate urgency. Low- to moderate-income homeowners may experience pitfalls when choosing a contractor or service provider. Programs like NYC Accelerator seek to eliminate that possibility, but OUS believes the City should go one step further and create a Consumer Bill of Rights. Provisions could include no decommission fees or volatile interest rates passed on to the consumer, as well as a good/bad actor list similar to the NYC Worst Landlord list. OUS believes MOCEJ and QBPO could work together in creating this list and updating it periodically.

We can no longer say we want to leave a better world for our children. We must plan for a Borough that is sustainable 7 generations into the future and then some.

Donovan Richards Jr., Queens Borough President



Environmental Justice, Education and Outreach

It must be stated that OUS created and aggregated all of these initiatives, ideas, and projects with the lens of environmental justice. Living sustainably is currently a privilege for those who have not been impacted by racist and classist environmental policies. QBPO has the unique position of addressing decades-long injustice by creating a new role.

OUS recommends the establishment of a *Queens Borough Environmental Justice (EJ) Coordinator*, a new full-time staff position. This person would serve as the central point of contact for environmental justice communities in Queens, and would advocate for Queens vis-a-vis the various City, State and Federal legislative acts that include environmental justice concerns. In addition, the Queens EJ Coordinator would oversee the development and implementation of the environmental justice goals outlined in the OUS agenda, and they would facilitate communication and coordination among Queens-based EJ groups and between those groups and various governmental entities.

Several city agencies now address these concerns, including the Mayor’s Office of Climate and Environmental Justice (MOCEJ) and the NYC Racial Justice Commission. At the State level, the NYS Department of Environmental Conservation (DEC) and the NYS Energy Research and Development Authority (NYSERDA) are administering the Community Leadership and Climate Protection Act (CLCPA), with guidance from the Climate Justice Working Group. At the federal level, the Environmental Protection Agency (EPA) maintains an Office of Environmental Justice. Legislatively, acts such as the NY State Climate Leadership and Protection Act (CLCPA), the federal Inflation Reduction Act (IRA) and the federal Infrastructure Investment and Jobs Act (IIJA) contribute important regulatory guidelines and monetary/budgetary resources to this effort. DEC has an office of environmental justice (OEJ). OUS members are eager to collaborate with all of these agencies when implementing the CLPCA in Queens. The tendency for agencies to work in silos to fulfill these adjacent mandates and objectives within aggressive timelines poses special risk as the sustainability and vitality of our communities is at stake.

POTENTIAL PROJECTS

A Queens Borough Environmental Justice Coordinator (“EJ Coordinator”) would support a collaborative agency and regulatory effort through these specific tasks and initiatives:

Environmental and Climate Justice Legislative Coordination. The EJ Coordinator will represent the QBPO and Queens-based EJ groups on city and statewide task forces and will ensure that the borough is taking full advantage of EJ-related grant opportunities on the city, state and federal level. The EJ Coordinator will coordinate, and harness opportunities offered by the NY State Community Leadership and Climate Protection Act (CLCPA), the NYC Climate Mobilization Act (CMA), the federal Inflation Reduction Act (IRA), the federal Infrastructure, Investment and Jobs Act (IIJA) and the federal Justice40 guidelines.

Create and Update an EJ Map for the borough of Queens. The EJ Coordinator would work with Queens CBOs to create and validate an EJ map for the borough, identifying EJ indicators and communities. The map will:

- *Identify key indicators* including, but not limited to inland flooding, prevalence of abandoned houses, brown fields, air pollution, noise pollution and public safety, especially as it relates to: proximity to airports, manufacturing zoning districts, waste transfer stations, bus depots, trucking warehouses.
- *Assess, compare, and contrast city, state, and federal EJ maps* and create a clear analysis of their ramifications for Queens residents. For instance, this analysis will answer questions such as: What other agencies are creating such maps? What are the benefits derived from inclusion on each map? Are our vulnerable Queens communities represented on them? Answers to such questions will be compiled into a readable report and posted online. Actionable items should be addressed to secure the maximum benefit for vulnerable Queens communities.
- *Be updated on a regular basis*, as new data becomes available. As indicated earlier, various agencies are

developing their own EJ maps. Some of these maps identify vulnerable communities as “[disadvantaged communities](#).” Each map has a defined set of indicators that qualify their categorization as such.

Each map holds the promise of access to valuable resources for its qualified communities, but the potential for inefficiencies, redundancies and gaps is significant. For example, the Disadvantaged Community (DAC) Map by the CLCPA’s Climate Justice Working Group (NY State) is not informed by the lived experiences of residents of Southeast Queens. Thus, many South-East Queens neighborhoods, which are some of the borough’s most vulnerable, have been omitted from the DAC map. Similar maps being created by the Mayor’s Office of Climate and Environmental Change (MOCEJ) and by the Federal Government do a more accurate (although not perfect) job of identifying South-East Queens Disadvantaged Communities. The significance of being included versus excluded from a DAC map is uncertain but could well lead to a loss of funding for climate change mitigation for communities that desperately need it.

Manufacturing Districts in EJ Communities.

Create an in-depth survey of heavy or moderate industrial activity within EJ communities that addresses the following questions:

- Where are the manufacturing zoning districts in each EJ community?
- What business(es) is supported by the manufacturing zoning district?
- Who is the owner of the business?
- What (if any) environmental burdens do they pose?
- How do they rate as responsible/good neighbors?

In many of our EJ communities, manufacturing districts are integrated into our residential communities, often due to “[as-of-right](#)” zoning. Some of these manufacturing businesses impose environmental burdens and some operate outside of the bounds of regulatory requirements. Some businesses commandeer the sidewalk as part of their business space, creating a

hazard for pedestrians, the disabled, and parents trying to navigate with a stroller. Often, there is little transparency regarding the types of operations in which these businesses engage, and residents do not know which responsible parties they can speak with to make inquiries or voice their concerns.

Health and Academic Indicators Among School Aged Children in EJ Communities. The EJ Coordinator should work with institutional and community partners to create a comprehensive study that:

- Identifies and maps environmentally related health issues among school-aged children in Queens EJ Communities (i.e., asthma, lead levels, respiratory illnesses, etc.).
- Correlates these findings with academic indicators among these children and identifies “hot spots” where academic performance is lower than average and environmentally related health issues are higher than average.
- Findings should also be used to inform a deeper dive into the air and noise pollution sources and levels within the most burdened communities. Steps should be taken to actively reduce and manage these harms.
- Create environmental health resource centers in elementary, middle and high schools in “hotspot areas” identified through the research project described above. These would be modeled on the city’s [Neighborhood Health Action Centers](#) and its [School-Based Health Centers](#).

Design and Coordinate Outreach of an Environmental Education Curriculum: The Queens Borough EJ Coordinator could oversee the development of an environmental educational curriculum that can be shared throughout all Queens communities and delivered by Queens-based CBOs:

- Educating homeowners on landscaping practices that will support environmental sustainability, such as the use of alternative fertilizer and planting of native plant species and/or pollinators to attract local bird species, bees and other fauna that are possibly endangered.



- Educating homeowners about the liberation of soil and how cement increases runoff and risk of flooding.
- Education of homeowners/tenants on the importance of adopting practices in support of Zero Waste: reduce, reuse, and recycle, compost.
- Education of homeowners and tenants on energy saving practices and options, e.g., use of low-flow toilets, low-energy lightbulbs, solar roofing, etc.
- Development of an environmental education/ sustainability curriculum for public schools to include such topics as climate change, zero waste, civic/social responsibility.
- Education of community members on local evacuation routes and resources for emergency response.

Climate Justice (CJ) Fellows Program. The Queens Borough EJ Coordinator, in collaboration with local EJ CBOs, will design and oversee a Climate Justice Fellows Program which will support the Coordinator’s EJ initiatives. Selection of fellows will be done through an annual competitive process, and candidates will be recruited from Queens-based undergraduate and/or graduate programs. Fellows would ideally represent the diversity of the borough, receive a paid stipend, and work 15-20 hours per week on OUS projects.

Flooding Resiliency, Nature and Ecosystems

Hurricane Ida caused widespread damage in Queens. Streets suddenly became rivers and flooding caused significant damage to homes and businesses. Many Queens residents were left without a place to live or work. Jackson Heights, Middle Village, Woodside, and Flushing all experienced multiple feet of flooding. Power outages in these communities lasted for days. The lack of electricity affected Queens residents’ ability to store food, communicate with loved ones, and work from home.

The response to the environmental and health crisis created by this flooding has been slow and inadequate. Many residents have reported feeling neglected and abandoned by the government and relief agencies. The lack of support has been particularly devastating for disadvantaged communities, who often have fewer resources to fall back on in times of crisis.

Flushing was particularly hard hit by flooding during Hurricane Ida. According to the U.S. Census Bureau, [the median household income in Flushing is \\$56,068](#),

which is lower than the median income for New York City (roughly \$76,000) as a whole. Additionally, approximately [66% of the population in Flushing is foreign-born](#), and approximately 81% of residents speak a language other than English at home. These factors contribute to the community’s vulnerability and the need for targeted relief efforts.

Council Member Sandy Nurse and Queens Borough President Donovan Richards Jr. introduced a bill that requires DSNY to develop a publicly available emergency and resiliency plan. [Intro 861](#) requires the agency to outline provision of services during various emergencies, including flash flooding, hurricanes, and even blackouts. It also requires DSNY to prioritize waste collection in areas prone to flooding, in advance of forecasted heavy rain events and flooding. The bill also ensures that DSNY is forward-thinking about the climate resiliency design of critical waste operations facilities.

DSNY plays a vital role in NYC’s resiliency from debris removal during hurricane season to snow removal in the winter month. We look forward to collaborating with DSNY to build even more resilient operations in the face of climate change.





It is crucial that the New York State and Federal governments, as well as relief agencies, recognize Flushing, as well as communities in Hollis and Woodside, [as disadvantaged communities](#) (as part of the CLCPA) and provide adequate support to help residents recover from the effects of Hurricane Ida. Furthermore, a focus on urban sustainability can help mitigate future impacts of natural disasters on communities like Flushing.

POTENTIAL PROJECTS

Increasing permeability. Queens is currently the second-most impermeable borough after Manhattan. “Liberating the soil” and incentivizing rain gardens, bioswales or other alternatives to concrete are paramount. Two pieces of research already showcase how we can manage stormwater and flooding:

- Permeable open streets: [Cornell proposal](#) to shift 10% of streets to permeable open streets.
- Recommendations for improvements to [NYC’s Green Infrastructure program](#).

Storm drains and combined sewer system.

Because garbage collection often blocks storm drains and exacerbates build up, there needs to be a shift in sanitation processes or storm drain maintenance. A

coordinated effort between DSNY and NYCEM to collect debris from flood-prone areas and to advise residents to remove debris away from the curb and storm drains.

Address combined sewer overflow issues. As part of the City’s Long Term Control Plan, only Newtown Creek and Flushing Bay will get any planned reductions in CSO. Flushing Bay’s project is paused indefinitely due to lack of funding. Other potential areas to reduce CSOs are the East River, Hallets Cove, Luyster Creek, and Jamaica Bay, but there are no current plans in place.

Turn real-life ecosystem issues into teachable moments. Beached whales in the Rockaways area of Queens have been an increasing concern in recent years. This issue highlights the need for increased monitoring of these animals to better understand the causes of these strandings and to mitigate their impacts.

The National Oceanic and Atmospheric Administration (NOAA) and Stony Brook Marine Science Research Center have expertise and resources that can be utilized to coordinate monitoring efforts. NOAA is responsible for the conservation and management of marine mammals in US waters, while Stony Brook Marine Research is a leading research institution on marine life. Increased monitoring of beached whales in the Rockaways is needed for several reasons:

- *Identify the causes of strandings:* Strandings can occur for a variety of reasons, including human activities, natural causes, and illness. By monitoring and studying beached whales, we can better understand the causes of these strandings and take measures to prevent them in the future.
- *Protect endangered species:* Several species of whales that are found in the Rockaways area, such as the humpback whale and the fin whale, are endangered or threatened. Monitoring these animals can help protect their populations and prevent further declines.
- *Mitigate impacts:* Beached whales can have significant impacts on the environment and public health. Monitoring these animals can help us identify and mitigate these impacts, such as by removing stranded animals and preventing further harm to the ecosystem.
- *Public education:* Beached whales can also provide an opportunity for public education and outreach. By monitoring these animals and sharing the information with the public, we can raise awareness about marine conservation and the importance of protecting these animals and their habitats.



Habitat restoration for Queens forests and wetlands.

- Identifying funding streams for habitat restoration that are not only tied to new development would greatly benefit us and wildlife. Here are some suggestions for restoration:
- Identify opportunities for and feasibility of tidal planters and on-land, modular wetland planters that pump water from a water body and cycle it through an engineered wetland.
- Increase wetland and oyster restoration in the following water bodies: Jamaica Bay, Alley Creek, Powell Cove, Flushing Creek, Flushing Bay, Bowery Bay, Luyster Creek, Hallets Cove, Dutch Kills, and Maspeth Creek.
- Install more rain gardens along public rights of way outside of DEP’s [Green Infrastructure Priority Areas](#).
- Identify opportunities for community owned and/or stewarded restoration (Community Land Trusts or Conservation Land Trusts focused on open/green space) and create pathways to actualization.
- Identify buyout opportunities for protecting high flood-risk areas and creating habitat or natural buffers.
- Identify unstable shorelines and failing bulkheads across the borough and create plans for rebuilding shores that achieve public access, habitat, sea level rise, and coastal flooding protection.
- Expand the Bluebelt system.
- Daylighting waterways, especially Flushing Creek, Kissena Creek corridor and Oakland Lake, provide a good opportunity to address flood resilience and other issues.

Climate migration projections. Much like the demographic shifts in certain neighborhoods, the City should begin to track climate migration in and around flood-prone areas. This could also include a study of displaced residents in commercial hotels in the wake of natural disasters and the subsequent impact on our sewer infrastructure.



Transportation and Walkability

While we are proud that the public transit system is used by [56% of all New Yorkers](#), city streets and other modes of transportation could be made safer and more resilient. Overall, a Queens Greenway could play an important role in helping to shift the balance away from car transportation and towards more sustainable and equitable modes of transit. By reducing the need for dedicated space for transit, the project could help to create a more livable and vibrant city for everyone.

A Greenway is envisioned as a proposed pedestrian and cycling path that would run through various neighborhoods in Queens. The goal of this project is to create a network of safe, connected, and accessible streets and paths for pedestrians and cyclists, thereby

reducing the need for car transportation and promoting a more sustainable and healthy way of moving around the city.

By creating more space for pedestrians and cyclists, a Queens Greenway would help to reduce the demand for car transportation and in turn decrease the need for dedicated space for cars on the city's streets. With a large percentage of urban space taken up by cars, this is needed to help shift the balance towards a more equitable and sustainable allocation of space.

Some specific ways in which a Queens Greenway could help to reduce car-dependent transportation include:

- *Encouraging more people to walk or bike instead of driving:* By providing a safe and convenient option for pedestrians and cyclists, the Queens Greenway would make it easier for people to choose active transportation over driving. This would reduce the

demand for car space on the city's streets and free up room for other uses.

- *Providing an alternative to public transit:* For shorter trips, walking or cycling may be a more convenient option than taking public transit. By providing a network of safe and accessible paths, the Queens Greenway would help to reduce the demand for transit, which in turn could reduce the need for dedicated space for buses and trains.
- *Creating a more livable and attractive city:* By making it easier and safer for people to walk and bike, the Queens Greenway would help to create a more livable and attractive city. This could encourage more people to choose to live in Queens and may also attract more businesses and visitors to the area, which could further reduce the need for car transportation.

POTENTIAL PROJECTS

Highway overpass assessment. Highways like the Van Wyck, Grand Central Parkway, and the Long Island Expressway cut Queens up into sections, making it difficult for pedestrians to cross to adjacent neighborhoods on foot or by bike. While there are pedestrian and bike overpasses in place at some junctures, to truly invest in public transportation the Borough must have more safe connections between neighborhoods separated by highways in the form of pedestrian overpasses and/or bike paths. The Queens Borough President's Office could work with the NYC and NY State Departments of Transportation to identify missing and/or decrepit pedestrian overpasses in the following priority areas:



- Connections to Flushing Meadows-Corona Park
- Connections between South Jamaica and Richmond Hill
- Connections between Maspeth and Long Island City

Exploring Ferry and Bus Rapid Transit expansions at LaGuardia Airport. These transportation modes are vital for many New Yorkers, but transit to and from LaGuardia (LGA) Airport remains out of reach for residents in South Queens. While the original LGA AirTrain proposal has been [put to rest](#), OUS recommends the implementation of easier, more cost-effective transit. There should be a thorough study on establishing a Bus Rapid Transit system that would connect neighborhoods in Northeastern, Southeastern and Southern Queens. To complement this new system, the City could also expand its ferry service along Flushing Bay and the East River to better connect to LaGuardia.

CONCLUSION

Many of the efforts named in this report involve multi-agency and public support – we realize these projects will take dedicated time, money and coordination. However, our climate future grows more uncertain with each day. Through grass-roots collaboration, meetings, late nights and discussions, OUS has put together many local and far-reaching projects that should receive funding through City, State and federal funding streams.

Queens has made great strides towards urban sustainability in recent years through a variety of initiatives focused on composting, flooding and resilience, environmental justice, transportation alternatives, and renewable energy. The implementation of community composting programs has helped to reduce waste and improve soil health, while green infrastructure projects have increased resilience to flooding and other climate-related hazards.

Efforts to address environmental justice concerns have also been a priority, with a focus on ensuring that low-income and marginalized communities have equal access to sustainable resources and opportunities. Alternative transportation options, such as bike lanes and public transit, have reduced carbon emissions and improved mobility for all residents. With new wind, solar, hydroelectric power and battery storage projects developing in the next few years, Queens will be a leader in renewable infrastructure.

Finally, the adoption of renewable energy sources has played a critical role in reducing reliance on fossil fuels and lowering the overall carbon footprint of the borough. While there is still much work to be done, Queens' commitment to sustainability and resilience is a testament to the power of local action and community engagement. By continuing to prioritize sustainable initiatives, Queens can lead the way in creating a more equitable and resilient urban environment for all.