

**Philadelphia City Council
Committee on Transportation and Public Utilities
October 9, 2012 Public Hearing**

Testimony on Behalf of Clean Air Council, Clean Water Action, Darby Creek Valley Association, Delaware County Citizens for a Clean Environment, Delaware Riverkeeper Network, Friends of the Heinz Refuge, Keystone Conservation Trust, Pennsylvania Audubon, PennFuture, Philadelphia Parks Alliance and the Southeastern Pennsylvania Group of the Sierra Club

Our organizations appreciate the decision of the Committee on Transportation and Public Utilities for the Council of the City of Philadelphia, Councilmembers Johnson, Kenney, Bass, O'Brien, Greenlee, and Green, in particular, to hold this hearing on the flooding conditions and hazardous flood risks affecting the Eastwick area. We further appreciate the opportunity to file joint testimony on behalf of several regional environmental organizations: the Clean Air Council, Clean Water Action, Darby Creek Valley Association, Delaware County Citizens for a Clean Environment, Delaware Riverkeeper Network, Friends of the Heinz Refuge, Keystone Conservation Trust, Pennsylvania Audubon, PennFuture, Philadelphia Parks Alliance and the Southeastern Pennsylvania Group of the Sierra Club.

Our organizations all have members who live and work in the Eastwick area. Our organizations have been working in partnership with Eastwick residents and the John Heinz National Wildlife Refuge to address environmental issues within Southwest Philadelphia.

Together with the results of the Philadelphia Water Department flooding survey, testimony from community residents and other experts will attest that Eastwick experiences significant chronic flooding problems due to inadequate infrastructure and improper land development within the floodplain. In addition to flooding which results from normal stormwater events, the community is at serious and increasing risk from catastrophic flooding associated with its low elevation and predicted increases in storm surges and sea level rise.

Our testimony addresses flooding in Eastwick. We address flooding in the context of the myriad environmental hazards that burden the area disproportionate to other parts of the City -- hazards affecting the health, safety, and livability of the Eastwick community and the maintenance of the habitat quality of the Refuge.

Our organizations are very troubled that this hearing represents simply a brief "time out" before the City of Philadelphia proceeds in what is a fundamentally wrong direction with regard to the Eastwick area.

The City of Philadelphia seeks to extricate itself from the remaining legal knots lingering from a misguided and stalled, 1950's era urban renewal scheme, and ensuing redevelopment deals, of which 128 acres remain undeveloped. Our

understanding is that the City is preparing to resume its planned rezoning of 35 acres of the Eastwick green space and transfer the remaining 93 acres to the airport.

We strongly support the Eastwick Friends and Neighbors Coalition in its demand that the City reconsider the precipitous plan to redevelop Eastwick's remaining green space in the absence of a fair, inclusive, and thoughtful planning process. That process will need to not only effectively address existing environmental challenges but also afford to Eastwick and the John Heinz National Wildlife Refuge the opportunity to benefit from the 21st century sustainability strategies that the City is pursuing in its other neighborhoods.

I. Eastwick is Disproportionately Burdened by Environmental Harms

The U.S. Environmental Protection Agency defines environmental justice as follows:

"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. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."

Eastwick is a neglected and disenfranchised community. It has suffered heavily from the legacy cumulative flooding, siting, and pollution problems detailed below, as well as fragmentation and economic dislocation due in great part to Philadelphia Redevelopment Authority and City land use decisions for the benefit of other interests. It is high time -- past time -- for the interests of Eastwick residents to be top priority. Redressing the disproportionate burdens on a community such as Eastwick demands disproportionate remedies, if justice is genuinely to be served.

A. Flooding in Eastwick

The neighborhood of Eastwick has a history of chronic and catastrophic flooding that has historically been ignored even as flooding has grown worse over time. There are many natural influences as well as man-made modifications that have exacerbated the problem. There are tools to understand and deal with the flooding issue which unfortunately have not been updated and thus the problem goes unchecked.

The Eastwick area once was made up of 5,000 acres of marshlands and wetlands that were filled and developed in a haphazard fashion from the 1600's to the 1960's. In the 1960's, the City condemned 2500 acres, demolished the homes of 10,000 residents, and imported 15 million cubic yards of fill to raise the land for redevelopment purposes. In the process, the mitigating effect of this once large wetland complex for flood storage was destroyed.

Today, Eastwick remains a very low lying area. In fact, portions of the community live right at sea level.

1. Global climate change and sea-level rise

Global climate change and sea-level rise is a slow, insidious process that is already affecting the budgets, health, safety, and welfare of the residents of Philadelphia. Overall, according to the USEPA, these changes will increase the number and impact of flooding events, including the frequency of current "100-year flood," storm surges, erosion, and the destruction of important coastal ecosystems. According to a recent Rutgers University study, the Atlantic Ocean along the New Jersey coast rose "a little less than a foot" for the whole of the 20th Century. However, the study estimates that based on their data, sea-level will rise another foot by 2050. By the end of this century, the sea level will have risen another 2.4 feet globally and 3 feet in New Jersey, New York and southern New England including the Delaware River Estuary.

The Partnership for the Delaware Estuary finds that the increased frequency of intense storms, storm surges and coastal flooding will result in increased sea level leading to elevated river and creek levels, greater loss of coastal wetlands, increased intrusion of saltwater into groundwater, and higher salinities affecting water supply intake. These threats will affect many of our important natural resources both from an ecological but also an economic standpoint. Each of the agencies and entities cited has declared that emergency managers should consider the implications of climate change regardless of the cause.

According to a University of Pennsylvania study prepared for the Delaware River Basin Commission, "residents, businesses, and cultural and natural resources should be protected from the consequences of climate change."¹ Much of the projected threat could be avoided through land use policies that discourage floodplain development, incentivize relocation from the path of sea level rise, and require stronger development design standards in hazardous areas.

According to the Philadelphia Water Department, the City is already paying for global climate change and sea-level rise. The conditions cited require PWD to upgrade infrastructure and increase pipe capacity, pumping stations and facilities to deal with more intense rain events and storm surges. As levels of water in the Delaware River get higher, pump stations will need to be installed to pump the stormwater up into the river when it rains.²

2. Chronic Flooding in Eastwick is Occurring with Increasing Severity and Frequency

¹ J. Barnett and A. Dobshinsky, "Climate Change: Impacts and Responses in the Delaware River Basin," Prepared for Delaware River Basin Commission by University of Pennsylvania City Planning 702 Urban Design Studio, Fall 2008.

² Testimony of Deputy Water Commissioner Christopher Crockett before the House Democratic Policy Committee Hearing on Climate Change: Regional Impacts and Policy Options, June 7, 2012.

Current FEMA flood maps rely on rainfall data that were generated in the early 1960's and do not reflect current climate conditions. The maps do not take into account the Darby Creek as subject to tidal influence through and above the Eastwick neighborhood. Several studies have documented that sea level is rising faster in the Mid-Atlantic States than anywhere else.³

Eastwick residents are already seeing the effects of sea level rise. At least 9 significant flood events have occurred in Eastwick over the past thirteen years. In addition to sea level rise, the greater frequency and intensity of rainfall events predicted by numerous climate scientists is expected to cause flood events to worsen.⁴

Land development is also huge contributing factor. The City has approved extensive redevelopment of Eastwick in areas mapped as flood prone areas. Thus, there are a substantial number of homes and businesses located in areas that experience chronic and increasingly frequent floods. These conditions exist despite the City's stormwater infrastructure designed to handle full build-out of Eastwick. Development of the 128 acres clearly will exacerbate these problems for the City and its residents. Further, upstream development of floodplain areas in portions of the Cobbs and Darby Creeks has caused hugely increased flood flows from roofs, parking lot, and street runoff that wash into Eastwick.

There has been no comprehensive, system-wide evaluation of the surface or subsurface drainage in this urban community and how it might be brought into conformance with the Green Cities, Clean Waters program being promoted by the City.

3. Proposed Development will Put Existing and New Residents in Harm's Way

The City does not need new maps to understand the risk posed by Korman's proposed development. Substantial portions of the proposed development are located in an area currently mapped by FEMA as falling in the 100-year floodplain. If the maps were updated, it is a virtual certainty that the entire site -- both the 35 acres under consideration for rezoning as well as the 93 acres to be transferred to the City -- would fall into the area defined as subject to 100 year flood events.

³ See: Asbury H. Sallenger Jr., Kara S. Doran & Peter A. Howd, "Hotspot of accelerated sea-level rise on the Atlantic coast of North America," in *Nature Climate Change* (2012) doi:10.1038/nclimate1597 [<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate1597.html>]; Ben Strauss & Remik Ziemlinski, "Sea Level Rise Threats to Energy Infrastructure: A Surging Seas Brief Report by Climate Central, April 19, 2012 [<http://slr.s3.amazonaws.com/SLR-Threats-to-Energy-Infrastructure.pdf>]; Committee on Sea Level Rise, National Research Council, *Sea-Level Rise for the Coasts of California, Oregon and Washington: Past, Present and Future*, National Academies Press, 2012.

⁴ See, e.g., "Basic Science of Climate Change," Testimony of Dr. Richard B. Alley before the House Democratic Policy Committee Hearing on Climate Change: Regional Impacts and Policy Options, June 7, 2012.

Regardless, the location of the proposed development and the surrounding area have an existing high water table and are already subject to flooding. Thus, there is significant potential for increased flooding in the adjoining community as development takes place, as will be discussed in other testimony submitted today.

The risk to new residents will also be profound. The proposed development is to be sited on slightly higher elevation than the surrounding area with Lindbergh Avenue designated as the only entrance and exit. If the development does occur, emergency evacuation of as many as 1,000 people may be cut off as the only road access will be inundated in areas currently mapped as a 100 year flood zone. Even if the proposed apartment complex does not flood, new residents will be trapped.

As sea-level rises and storms and localized flooding worsen there will be increased impacts on the public safety and welfare of the residents. Flood levels in the future are certain to be significantly higher than those presently mapped and the extent of the flood hazard zones will be greatly expanded. If rezoning and redevelopment plans for the 128 acres are approved, current and future residents of Eastwick will be placed at significant risk of catastrophic flooding. The cost in human terms as well as to the emergency response budget of the City will be significant. Allowing development to take place on these lands is a fundamentally unsupportable position.

Considerable research is needed to properly understand the nature and extent of the risk of flooding in Eastwick. Additional development should, at a minimum, be delayed until the research is complete and a thorough understanding of methods to solve existing problems are fully funded and constructed.

B. Other Cumulative Environmental Burdens on Eastwick and Refuge

Chronic flooding and vulnerability to catastrophic flooding represent a fraction of the overall environmental impacts affecting Eastwick and the Refuge. These issues must be viewed in the context of the larger environmental burden on this area.

1. Toxic Contamination of Ground and Surface Water, and Soils

There is a legacy of contamination of the Eastwick and Lower Darby Creek areas from improper storage, disposal, and dumping of waste in the area. Of greatest concern are the two Superfund listed sites -- Folcroft and Clearview Landfills -- in the area. The EPA has lead authority over the investigation and remediation of the Clearview landfill. The Folcroft landfill investigation and site remediation are under the purview of the U.S. Fish and Wildlife Service.

Clearview Landfill represents an especially significant stressor to the Eastwick community in Philadelphia, as well as presenting potential ecological health risks to the Darby Creek Watershed. Clearview Landfill was privately owned and operated without a permit from the 1950s to the 1970s by the Clearview Land Development Corporation, and used for the disposal of municipal and industrial waste collected

from the City of Philadelphia and portions of Delaware County. In August 1973, due to several violations of state regulations related to land disposal and the absence of a landfill permit, the Pennsylvania Department of Environmental Resources (PADER) took court action against the Clearview Land Development Corporation, and ordered it to cease all waste disposal activities at the landfill and follow a prescribed closure plan. However, even after this order, the property continued to be used for other waste disposal operations for many years. As detailed in the U. S. Environmental Protection Agency's Feasibility Study for the Clearview Landfill, activities occurring on the site, up to as recently as 1981, included dumping and open burning of demolition waste and tires, the unpermitted and improper handling and disposal of hazardous materials, and the burying of waste chemicals.

Over the twenty years after PADER first issued notices of violation for Clearview Landfill in 1973, PADER and EPA conducted a series of hazardous contamination investigations, detecting contaminants leaching into groundwater, surface water and sediments.

After the listing of Clearview, soil, air and water sampling was conducted between 2002 and 2006. The Remedial Investigation was completed in May 2011, identifying unacceptable risks to human health from groundwater, surface and subsurface soils and fish in Darby and Cobbs Creeks. Numerous contaminants have been detected in various media. The most significant contaminants include PCBs, PAHs, certain metals, dioxins and pesticides. Potential unacceptable risks to people or ecological receptors were identified in surface and subsurface soils, groundwater and fish tissue from Darby and Cobbs Creek.⁵

EPA determined that the soils in the City Park area and the adjacent Eastwick neighborhood are contaminated as well. EPA concluded that the full extent of the groundwater contamination from the leaching of contaminants requires further investigation. In addition, portions of the surface soils were found to contain levels of PCBs that required immediate removal action. The removal action has been completed, and earlier this month EPA released its feasibility study for remediating the landfill site.

While the investigation process was prolonged by EPA's inability to obtain full access to the Clearview site, in any event the delay in resolving the ongoing migration of contaminants from the site and risks of exposure to humans and wildlife has been inordinate. The health risks for the children in the Eastwick neighborhood should be of particular concern. As noted by technical consultants in the interpretation and evaluation of the EPA's Remedial Investigation Report:

⁵ Remedial Investigation (RI) Report for Lower Darby Creek Area Site, Clearview Landfill, Operable Unit 1 (OU-1), Delaware and Philadelphia Counties, Pennsylvania. EPA Contract Number EP-S3-07-04; EPA Work Assignment Number 023-RICO-D366. Tetra Tech Project Number 01067. May, 2010. <http://www.epa.gov/reg3hwmd/npl/PASFN0305521/ri/Report.pdf>

Risks presented for residents in the Eastwick neighborhood exceed the acceptable risk targets for exposure to surface (0-1 ft below ground surface (bgs)) and total soil (0-10ft bgs). This is of particular concern because there are children living in the neighborhood who can contact the soil at a high rate. The contaminants with elevated risks in surface soil are PAHs (benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene).

Chloroform was also identified as a contaminant contributing to excess cancer risks due to inhalation of indoor vapors, specifically from chloroform penetrating homes from soil gas vapors.

Urban background concentrations for benzo(a)pyrene are around 1ppm. The average b(a)p concentration in soil in the Eastwick neighborhood is 3.5ppm. Figure 4-30 indicates there are elevated concentrations of benzo(a)pyrene in the Eastwick neighborhood. Remedial action would be necessary to bring PAH concentrations throughout the neighborhood in line with regional background. Cobalt and iron contribute to unacceptable non-cancer risks, but these represent background conditions.⁶

The Clearview Landfill, an EPA Superfund site, sits in the floodplain of the Darby Creek and there are significant concerns that during now frequent flooding, toxic substances are being carried throughout the neighborhood and into the John Heinz National Wildlife Refuge.

2. Unknown Environmental Quality and Instability of Fill Material

The environmental quality of the soil in the Eastwick area overall is unknown. EPA concluded from sampling the Eastwick neighborhood for the Remedial Investigation that the soil surface consists of 1 to 2 feet of "reworked soil fill and demolition debris" overlying 15-25 feet of discontinuous sand, silts, clays.⁷ Contaminated dredge spoils and ash may also have been used to fill portions of the floodplain area for the residential redevelopment.

⁶ Interpretation and Evaluation Summary for Final Remediation Investigation Report, volume 1, May 2011: Remedial Investigation and Feasibility Study (RI/FS), Lower Darby Creek Area (LDCA) Site, Delaware and Philadelphia Counties, Pennsylvania. Prepared by EnviroAce, LLC, January, 2012, p. 18. Darby Creek Valley Association (DCVA) was awarded a Technical Assistance Grant (TAG) in 2005. The TAG funds were committed to assist the community in participating in decision making at the Clearview as well as the Folcroft Landfill Superfund sites. DCVA, on behalf of the community and the watershed, has been concerned about the impacts of the landfill on the community, especially in combination with increases in flashy storms and resulting stormwater runoff. With the TAG funds, DCVA contracted with an independent technical advisor to interpret and help the community understand technical information about these sites. DCVA continues to participate in meetings with EPA, review technical documents with the consultant, EnviroAce, and translate this information to the community through its newsletter and website.

⁷ Feasibility Study Report for Lower Darby Creek Area Site, Clearview Landfill Operable Unit 1 (OU-1), Philadelphia And Delaware Counties, Pennsylvania. EPA Contract Number Ep-S3-07-04, Work Assignment Number 023-Rico-D366. Tetra Tech Project Number 01067 for the U.S. Environmental Protection Agency. October, 2012. p. I-8.

Beyond soil contamination concerns, there is a significant and documented problem of soil instability and settling. As City officials are well aware, many Eastwick residents have experienced serious problems with cracking foundations and sinking homes resulting from improper grading of the land.⁸ Appropriate measures to resolve these existing problems should be pursued, and a full evaluation of land stability and soil composition should be conducted before any further housing construction is pursued.

3. Air pollution from multiple sources

a. Existing Pollution Sources In S/W Philadelphia

The neighborhoods in South and Southwest Philadelphia are the most burdened from air pollution in Philadelphia.

The emission sources in South (Health District 2) and Southwest (Health District 3) Philadelphia include: a major refinery, the Schuylkill River Tank Farm, Belmont Terminal, Southwest Water Treatment Plant, Philadelphia International Airport, Aker Shipyard, SPC (car crushing operation), Plain Products Terminals, Clean Earth (waste disposal) and Pearl Pressman Liberty. The communities also have a large number of permitted area sources including 59 gasoline stations, 30 autobody shops and 14 Perchloroethylene dry cleaning facilities in these areas. It is also well know that the community has a large number of non-permitted auto-body shops.

The impact of air pollution from stationary sources is made worse by neighborhoods being in close proximity to major highways and other goods movement hubs. Finally, other factors such as poor housing stock, limited green space and socio-economic factors make air pollution particularly problematic for residents of this area.

More generally Philadelphia still struggles to attain and maintain the federal health standards for ozone and particulate matter. This adds a great burden to residents' health including increased asthma rates and other respiratory illness.

Clearly any proposal to add to the environmental burden of this community should be very carefully reviewed.

b. Air pollution and Construction:

Construction activities generate substantial amounts of air pollution from different sources and activities. Even though construction related air pollution is considered temporary, the impacts on surrounding neighborhoods can be profound. Given the environmental justice aspects of the hosting neighborhood and the existing

⁸ Samantha Melamed, "Sinking Feeling," City Paper, Apr. 26, 2012.

pollution sources, any additional activities that will create substantial air pollution should be avoided.

The most common sources of pollution from construction activity include:

- Particulate matter pollution from diesel exhaust from trucks and construction equipment. These vehicles contribute to air pollution are related to land clearing, soil hauling, and diesel exhaust in construction equipment and trucks. Diesel particulate matter, or soot, consists of many chemicals, including a number of carcinogens, and is related to a multitude of health impacts.
- Additional volatile organic and oxides of nitrogen from the vehicles of the construction workers. This contributes to Ozone (smog).
- Fugitive particulate emissions from soil disturbance including site grading and cut/fill. The PM emissions from fugitive particulate emissions also contain whatever contaminants are in that soil.
- Volatile Organic Compounds (VOCs) from paving activity and architectural coatings. VOC health impacts include respiratory illness, nausea, and damage to internal organs. VOC are often associated with troublesome odors.
- Noise pollution.
- Greenhouse gas emission from the burning of fossil fuels.

c. Localized Pollution

The addition of a 700 unit apartment complex and 1000 space parking lot would have permanent impacts on local air quality. Increased congestion from 700 new residents and 1000 new cars on local streets would be a significant increase to an already congested area. There would be significant localized pollution from “cold starts” at the parking lot. Cold starts release the most concentrated pollution from a car’s engine, and would be centralized in the Eastwick neighborhood.

Air quality in South and Southwest Philadelphia is already significantly behind national standards, and people in these communities are exposed to a disproportionate health risk. Adding more sources of air pollution through the construction and placement of a new apartment complex and accompanying parking lot would be irresponsible and unfair to community members already burdened by poor air quality.

II. Path forward

A policy framework for bringing environmental justice to Eastwick is suggested by the 3-part approach developed by the Los Angeles Collaborative for Environmental Health and Justice:

- **Prevention:** Prevent further increase in the cumulative environmental impacts in overburdened communities.
- **Mitigation:** Clean up, reduce and mitigate existing environmental problems and hazards.
- **Revitalization:** Implement innovative economic revitalization approaches and invest in emerging green technologies to transform overburdened areas into healthy, sustainable and vibrant communities with jobs for local residents.⁹

It is incumbent upon the City of Philadelphia first to ensure that the municipal government, itself, does not inflict any further environmental injustice on the Eastwick community. The City must also insist on the convening of an intergovernmental collaboration, in consultation with community and other stakeholders, to address the community's needs in a comprehensive way.

1. The City Must Move Past its Outdated and Retrograde Approach

The redevelopment of Eastwick was launched in 1957. Since that time there has been a vast amount of change in the physical context of the area. I-95 was built. The John Heinz National Wildlife Refuge was established. The Folcroft and Clearview landfills opened, then closed. Multiple airport and airport facilities expansions and additional development have increasingly encroached on the community.

The environmental, social, and health costs of these developments have accumulated significantly, with negative health impacts for Eastwick residents. Over time, our local, state and federal policy responses to mitigate those costs have grown. Eastwick has barely begun to realize the impacts of new policy solutions. The Folcroft and Clearview landfills have only been listed as contaminated sites; they are still awaiting clean up. Under the circumstances, it makes no sense to proceed with the remaining Eastwick land deal without first, thoroughly examining whether it is as seriously out of date as many other things done 55 years ago. This is especially the case in light of the new directions Philadelphia is taking towards sustainability and forward-looking planning.

2. Interagency cooperation

Rather than aggravate the challenges in Eastwick with another destructive redevelopment scheme, we call on the City of Philadelphia to take advantage of the several opportunities to pursue collaborative and comprehensive solutions.

If nothing else, the environmental challenges detailed above are complex, and call out to be resolved through cooperatively developed and coordinated solutions.

⁹ Los Angeles Collaborative for Environmental Health and Justice, *Hidden Hazards: A Call to Action for Healthy, Livable Communities*. December, 2010, p. 24.

We urge the City of Philadelphia to take the lead in calling for the convening of local, state, and federal agencies, with participation by community and other stakeholders, to develop a comprehensive approach to remediating the Clearview Landfill contamination and strengthening protection from catastrophic flooding.

Consider, for example, that the remediation of the Clearview Landfill will necessarily involve major earthmoving activity near the confluence of the Darby and Cobbs Creeks, which we understand to be a key location for flood hazard mitigation against storm surges backing up the creek flow and inundating Eastwick with heavy flooding. Similarly, the development of any comprehensive solution to flooding at Darby and Cobbs Creek – such as constructing a proposed berm – has the potential to disturb contaminated soils or direct water towards the Clearview site.

The Philadelphia Water Department, PA DEP, PEMA, FEMA, the Army Corps of Engineers, U.S. Fish and Wildlife Service, and EPA all need to be involved in creating environmental health and safety solutions for Eastwick – with the community directly involved and fully informed at every step.

We urge the City to take the lead in advancing multi-jurisdictional and interagency cooperation. We further urge the City to explore the programs available through EPA, including the Alternative Dispute Resolution program, to identify remedies for the environmental justice challenges facing Eastwick.

3. Philadelphia's new directions, new opportunities

Our organizations have strongly supported the new direction embraced by the Nutter administration to make Philadelphia the "greenest city in the nation." As the Mayor and his Sustainability Director noted recently in issuing the *2011 Greenworks Progress Report*, "Philadelphia's commitment to sustainability has put us on the map, and other cities are looking at the example we're setting."¹⁰ And together, the *Greenworks* initiative launched in 2009, Zoning Matters, Green2015, Green City, Clean Waters, and Philadelphia2035 initiatives hold great promise for making Philadelphia the "world class, 21st century city" it aspires to become.

a. Greenworks

The goals of *Greenworks* are laudable and should all be pursued in Lower Southwest Philadelphia, as throughout the City. The goal of "delivering more equitable access to healthy neighborhoods" has particular relevance for the Eastwick community. And the targets related to air quality improvement, and innovative green infrastructure solutions for stormwater management are of particularly immediate importance to the health and welfare of the Eastwick community.

¹⁰ The City of Philadelphia Mayor's Office of Sustainability, *2011 Greenworks Philadelphia Progress Report*. p.1.

b. Green City, Clean Waters

Philadelphia's Green City, Clean Waters program is a landmark undertaking to fundamentally shift the way the City manages urban water resources and to “protect and enhance [Philadelphia’s] watersheds by managing stormwater with innovative green infrastructure.” The program is predicated on a new understanding that a stormwater infrastructure approach that 'mimics Mother Nature' with soft engineering can be more effective, less expensive, as well as providing multiple side benefits for the built and natural environment. The approach relies in part on the opportunity to utilize the natural capacity of wetlands and vegetated areas to capture, retain, infiltrate and evaporate stormwater. In the past, the City has relied on hard engineering solutions, running all stormwater through pipes that discharged directly to rivers and streams as quickly and in as large a volume as possible. The City now purports to be committed to applying its Green City, Clean Waters approach to “promote the economic and social growth of the City and [to] meet environmental, ecological and business missions.”

What about Eastwick? From a simple examination of the “Big Green Map” on the Philadelphia Water Department's website, it appears that Eastwick is being excluded entirely. The map shows an absence of any plans to introduce new green stormwater infrastructure projects in Eastwick. Yet Eastwick, with its chronic flooding conditions but expanse of potentially restorable floodplain and tidal wetlands, would seem a prime candidate for green infrastructure solutions. Worse yet, the City appears poised to make an already bad situation worse, by allowing a new apartment complex in the already flood prone area, and forfeiting the very significant green infrastructure opportunity the parcel offers.

The City of Philadelphia is trading on its reputation as a shining example for green stormwater infrastructure management. It can do great damage to that image by abandoning that commitment when it comes to Eastwick. More importantly, the City must take responsibility for ensuring that the stormwater management strategies applied in Eastwick ameliorate existing stormwater pollution and flooding impacts and assure reduced vulnerability of Eastwick's residents to catastrophic flooding. It is very difficult to imagine how proceeding with approval of the Korman apartment complex and transfer of the remaining greenspace to the airport will meet those objectives.

c. Green 2015

Through the Green 2015 elements of *Greenworks*, the City of Philadelphia has committed to turning at least 500 acres of underutilized vacant land into parks and green spaces. The focus of the program is on providing greater and more equitable access to open space for all City residents. In the 30 years since redevelopment of Eastwick stalled, vegetation has regenerated on the land and portions of the land provide benefits to the Eastwick Community's environment and quality of life, from noise absorption to air quality filtration to passive recreational space. Proceeding

with the rezoning for the Korman apartment complex and associated transfer of land to the airport would result in a substantial "ungreening" of the Eastwick neighborhood and close off potential open space uses of portions of the land, to the detriment of current and future residents.

d. Philadelphia2035

Our organizations are keenly supportive of forward-looking Philadelphia2035, aimed at establishing a blueprint for Philadelphia through comprehensive planning neighborhood by neighborhood. There is great promise in the themes of the initiative: thrive, connect and renew.

Of special resonance for the residents of Eastwick in relation to current conditions is Philadelphia2035's number one listed objective to "improve neighborhood livability." We fully expect that Lower Southwest Philadelphia residents from the Eastwick area will enthusiastically embrace the opportunity to participate in a planning process aimed at meeting "ambitious" federal environmental standards, achieving "excellence in design and quality" of the built environment, protecting sensitive lands such as floodplains, and restoring tidal wetlands -- all of which are stated objectives of Philadelphia2035.

In conjunction with Philadelphia2035, the City Planning Commission launched a district planning process for each of eighteen planning districts in the city. Values promoted through the district planning process include community engagement, planning for healthy communities, integration of zoning and planning, and an embrace of long range visioning. The community of Eastwick would embrace all of these values as an opportunity to create a healthier and more sustainable community. Unfortunately, Eastwick's planning district – Lower Southwest – will not begin its planning process for another three years – long after decisions are made about the 128 acres in question.

City officials have stacked the deck against Eastwick. They are poised to force through the Korman rezoning and land transfer to the airport in advance of initiating planning in the area, permanently denying the community the opportunity to consider sustainable alternatives for, and benefit from the application of sustainable solutions to, the critical 128-acre parcel of open land.

4. Potential benefits from sustainable approach

Eastwick deserves the opportunity to participate fully in defining its future and to become a healthy, vibrant and resilient urban community. Eastwick residents must be given the chance to take full advantage of Philadelphia's sustainability and planning initiatives to do so. The opportunities to maximize its greenspace, to apply green infrastructure strategies, to site future development optimally, to plan for mixed uses and mixed income occupants, and to attract desirable public and private

investment, should all be made available and would all contribute to a higher quality of life.

Excellent public transportation and pedestrian and bicycle improvements are another key element of “green” comprehensive planning that should be employed in Eastwick. For the Eastwick Regional Rail station, and the area’s bus and trolley lines to serve as a true gateway to the John Heinz National Wildlife Refuge, and to the residential and business community, thorough comprehensive planning is essential to assure the necessary greenway corridors linking all elements of transportation and the community at large. Similarly, the walking and bicycling links from the East Coast Greenway and the Cobbs Creek Trail must directly access the vast open spaces of Heinz and be integrated as well into a green, human-scaled community.

The sense of wonder must begin at the station, transit stop or trailhead – not many blocks away. High-quality comprehensive planning is a must if development is to provide for improvements without compromising easy and attractive pedestrian and bicycling links to the Refuge and the community from the area’s transit lines and major bikeways and routes.

5. Conclusion

In summary, our organizations strongly support the Eastwick Friends and Neighbors Coalition in its call on the City to halt its momentum towards approving the proposed Korman development and transfer of the remaining Eastwick greenspace to the Philadelphia airport.

Proceeding in that direction would violate the sound planning principles and the goals woven into Philadelphia’s forward-looking sustainability initiatives. It would apply a piecemeal approach where the set of challenges cry out for comprehensive, thoughtful and collaborative solution and pooled resources. And it would put a lie to the City’s commitment to enable neighborhood residents to have meaningful involvement in determining their future.

Eastwick seeks to create a economically, socially, and environmentally sustainable future for its community and to have a meaningful and equitable voice in shaping that future. The City should live up to its promises and help make that dream a reality.

III. Just as Eastwick is Subject to Environmental Burdens, so is the Heinz Refuge.

The John Heinz National Wildlife Refuge at Tinicum (JHNWR, or the Refuge) is a haven for wildlife, with 11 state-listed endangered species and nearly 300 federally protected migratory bird species, many of which use the Refuge as a migration stopover site. JHNWR is one of the nation’s most urban refuges and, as such, is

impacted by a host of factors that accompany urban development, including noise, lighting, point and non-point source pollution, air pollution, flooding, feral cats, exotic invasive plants and animals, and a large number of recreational users. In spite of these many threats, JHNWR continues to provide safe haven to myriad plant and wildlife species. Intensive management by the U.S. Fish and Wildlife Service (USFWS) has abated some of the most serious threats to the refuge and should be credited with the overall health of the Refuge today, in the face of a litany of threats. It is not a stretch, however, to say that the USFWS is employing the vast majority of its resources at JHNWR simply to maintain the status quo, continually playing catch-up to prevent the Refuge from becoming severely degraded ecologically. Development of the Eastwick property has the potential to be the straw that broke the camel's back by introducing a host of new threats to the Refuge, and enhancing the magnitude of numerous existing threats.

Although the Eastwick property is degraded ecologically – harboring many exotic invasive plants, for instance – it still acts effectively as an open space buffer to JHNWR. Its scrubby vegetation provides habitat for many species, such as American Woodcock, and migrant warblers. It also keeps many of the problems that accompany urban development at arm's length from the Refuge.

1. Development Of The 35-Acre Tract Into High-Density Housing Would Bring A Host Of Issues To The Refuge's Doorstep.

a. Changes To Water Quality and Quantity

The exact impact of the proposed development on water at JHNWR would depend greatly on the type of stormwater management that is utilized, but it is unlikely to help what is already an undesirable situation. Sitting near the mouth of the Darby Creek, JHNWR receives stormwater runoff from a large section of the Philadelphia suburbs and has suffered several serious floods in recent years. Not only is JHNWR often receiving too much water, but the water it receives is full of pollutants, including oil that is washed off of roads and herbicides and pesticides used on suburban lawns. Salt and other pollutants used on the roads and sidewalks of the proposed development would add to the degradation of water quality at JHNWR. Decreases in water quality are likely one of the key reasons for the dramatic decline in nesting marshbirds observed at JHNWR in recent decades. Additionally, the ability to control water levels in the main impoundment at JHNWR is critical to provide mudflats for southbound shorebirds in late summer; this proposal decreases the likelihood that managers will be able to provide that habitat at the proper time of year.

b. Increased Fragmentation Impacts

Clearing the 35-acre parcel for residential development would create more habitat edges in the vicinity of the Refuge. Brown-headed Cowbirds abound in edge settings, parasitizing the nests of many Neotropical migrant birds. Other nest

predators, such as raccoons, are also attracted to edge habitats. Productivity of birds nesting within JHNWR would likely suffer from this increased habitat fragmentation. Fragmentation and disturbed areas are well known to increase populations of invasive European starlings which compete for cavity nest space with very beneficial insect eating native songbirds (martins, swallows, bluebirds) and flock in large numbers in parking lots, roads and other developed areas (including airports where they are removed in large numbers for public safety).

c. Increased Lighting At Night

Street lights, and porch and interior lights in the development may disorient migrant birds and bats, and may disturb the habits of species that are active at dusk and night, including American Woodcock, owls, frogs (including PA endangered leopard frog that breeds in vernal pools on refuge adjacent to and historically within Eastwick), and more.

d. More Glass

Glass in buildings of all types cause the deaths of up to one billion birds in the U.S. every year; birds either don't see the glass or see a reflection of natural habitat in the glass and collide with it. The addition of hundreds of housing units in close proximity to a major migratory stopover site for songbirds would undoubtedly lead to more bird deaths caused by window collisions.

e. Increased Noise

The cars, stereos, barking dogs, and other noise sources that accompany development can impact wildlife in a number of ways. Animals that use sound to communicate, such as birds and frogs, may stay away from the noisiest areas. Others may choose to stay in an area with higher noise levels, but must expend additional energy to communicate: a male bird defending his territory may need to sing louder or make increased visits to the outer portion of his territory just to ensure he is being heard by potential mates and rival males. Spending more time further from the nest makes the bird more susceptible to brood parasitism and nest predation, and the extra energy expenditure makes it less likely the bird will be able to successfully raise its young.

f. More Loose Or Feral Cats

Feral cats and housecats that are allowed outdoors are a tremendous threat to wildlife as they successfully prey on millions of birds each year in the U.S. Housing development at the Eastwick property would introduce more roaming housecats and, when owners decide they can no longer care for their cat, the Refuge would become a dumping ground for former pets.

g. More Introductions Of Exotic Pets

Natural areas, including JHNWR, are frequently targeted as sites to release unwanted non native exotic pets, especially reptiles, fish, small mammals and domestic animals. As with cats, the proximity of this development to JHNWR increases the likelihood of the release of nonnative species that are potentially harmful (both to wildlife and humans) and invasive.

h. Loss Or Alteration Of Vernal Pools

Development would eliminate vernal pool habitat on the Eastwick property, vital habitats for amphibians, and may alter vernal pools on or adjacent to JHNWR.

In addition to the 35-acre area currently in question, the ultimate fate of the remaining 93 acres of the Eastwick tract will greatly influence the health of the Refuge forevermore. Many potential uses could have the type of detrimental impacts to JHNWR that are outlined above. Potential uses that dramatically increase the amount of impervious surfaces, such as parking lots, could be even more damaging. In addition to the pollution and increased stormwater runoff from these types of uses, there is great potential for attracting large flocks of gulls, which would create a collision hazard for airplanes. The current avian inhabitants of the Eastwick tract are primarily small songbirds that pose virtually no danger to aircraft. These types of uses would also introduce more predators and habitat generalists to the edges of JHNWR, putting more pressure on some of the habitat specialists that currently reside in the Refuge.

2. The Refuge Provides Enormous Benefit to the Eastwick Community as the Refuge Itself Benefits from its Relationship to Eastwick.

The JHNWR was established by a federal act of Congress to protect and enhance this important habitat of national significance, while providing for environmental education and wildlife orientated recreation for all citizens of our nation, thus also enhancing local economies with substantial long term tourism revenues. The refuge serves also as a major natural filter for water quality into the Delaware Estuary while providing critical flood protection as a giant sponge for surrounding communities. Only by protecting this rare and unique national treasure will these resources continue to be available as a vital living classroom for all Philadelphia students and other citizens, while providing enhanced healthier lifestyles for all in full support Mayor Nutter's policy to expand green space and publicly announced goals of turning Philadelphia into a role model as America's greenest city.

It is especially important to support and enhance the unique, symbiotic relationship between the Heinz Refuge and Eastwick residents. The Refuge -- an oasis and source of inspiration and renewal -- is of heightened value to this environmentally burdened community.