Comments on NYC Waterfront Plan
May 28, 2021

Manhattan Solid Waste Advisory Board (SWAB), the borough's leading environmental body, which advises on increasing recycling, reducing solid waste, and advancing sustainability. Similar to Community Boards, members are appointed to two-year terms and have the ability to make a big impact in reducing our carbon footprint.

Storm damage creates wastes, most of which is burned and disposed of in landfills. Some of the waste is downed trees, and some is building debris. Flooding causes much of this damage to buildings in the floodplain and is a predictable result of this poor land use choice. The taxpayers are liable for the cost of cleaning up after buildings located in flood zones are laid waste. And vegetative matter is not always composted after a storm, as residents, eager to see the debris taken away, deposit the materials in mixed piles at the curb. Due to just one storm that came ashore in southern New Jersey, Superstorm Sandy generated an estimated 700,000 tons of storm debris, including construction and demolition debris, sand, concrete, and more than 27,000 tons of woody debris.[1] [2] Waste from this storm was burned in the open at Floyd Bennett Field, normally not something permitted under environmental rules. Only good planning with an understanding of the impacts of climate change will avoid a repetition of this.

[1] May 2013 - Hurricane Sandy After Action Report and Recommendations
[2] Commissioner of NYC's Department of Sanitation on Hurricane Sandy

Our responses to quotes or paraphrases from the Waterfront Plan are in bold.

1. The City's Waterfront Plan emphasizes climate mitigation, climate resilience and adaptation, and that an understanding of systemic climate risks should guide land use policies and infrastructure investments that support a thriving urban coastal floodplain. ***10 year vision***

In addition to prioritizing emissions reduction in transportation, efforts to mitigate climate impacts should also focus on zero waste initiatives. USEPA data show that half of carbon emissions emanate from the production, transportation and use of consumer products, packaging and food.[3] Therefore reducing consumption (e.g. via education, increased support for reuse and repair, recycling and composting) are meaningful solutions to climate change.

Damaging storms will continue to occur on a more frequent basis. The NYC Waterfront Plan should recommend development of and implementation of educational programs annually to advise residents and businesses to separate compostable vegetative debris and recyclable metals and concrete into separate piles. The Waterfront plan should also recommend funding of wood chippers and emergency recyclables sorting capacity, plan for their storage and deployment and emergency contracting.

2. The City's Waterfront plan suggests a limitation of future residential densities in waterfront areas where coastal flood risk through the 2050s cannot be practically managed or in areas where residential populations do not exist today and where infrastructure would need to be extended and maintained to support a new population. However later it contradicts this by suggesting preserving and creating new housing for a mix of incomes and providing resources to manage flood impacts for waterfront residents. ***Climate Resiliency and Adaptation Goal 2.3c and Goal 3***

The two concepts raised (limiting future densities in waterfront areas and also preserving and creating new housing, offering resources to manage flood impacts) are at odds. We favor limiting density in waterfront areas -- any encouragement to build or stay in the floodplains, which will expand significantly in the next few decades, will result in increased, avoidable, generation of waste, as well as risk to life.

[3] Consumer Demand and Climate Change w Contact .pdf

3. “In areas that face increasing exposure to chronic high tide flooding, the ability to maintain uninterrupted access to a decent, safe, sanitary home may become compromised over time. This scenario requires programs that facilitate housing mobility, or the ability of New Yorkers to improve housing conditions and achieve housing stability by deciding to relocate. In the context of flood risk, housing mobility can be supported by a range of services that include housing counseling, voluntary buyouts, relocation assistance, down payment assistance, and potentially others. Housing programs that expand climate risk awareness and support climate risk management will improve residents’ ability to stay in a neighborhood, even as it changes, or to move to a different neighborhood.” ***Climate Resiliency and Adaptation Goal 3.*** **3.3** “Promote housing stability for low- and moderate-income households that are adversely impacted by chronic high tide flooding and other coastal flood impacts.”

Managed retreat should be the message and it should be planned starting now. This should be the driving philosophy to avoid impacts of storms. Housing stability is status quo, which will lead to more buildings and lives at risk. Housing mobility sounds optional, however climate change is a certainty. The first step for managed retreat is to stop developing in the floodplain. Residents and businesses should not be offered incentives to stay in a floodplain. Incentives to move should be offered. There are precedents for this. See the pages at the end for references on buyouts and zoning already being done in numerous places.

Upzonings in the floodplain put more lives and property in harm's way. From Far Rockaway to Inwood there are numerous tall buildings proposed for the floodplain. Since new buildings will have a lifespan of as much as 100 years, this lifespan should be taken into account when zoning in the floodplain. Realize that by the end of a new building’s lifespan it might be in the floodplain when it wasn’t at the outset. The City’s Waterfront Plan should be clear that upzoning in and near floodplains should not be allowed, and in fact, downzoning floodplains should begin now as part of managed retreat from the coast.

4. “Identify additional opportunities for coastal protection, where feasible and practicable, to manage the impacts of coastal storm surge and chronic high tide flooding. ***Goal 4***
   Further incorporate resilient design principles into all buildings and infrastructure on the waterfront to ensure that new and retrofitted assets withstand increasing climate risk exposure. Update local regulations to anticipate future flood risks based on the best available climate risk information from the Federal Emergency

Management Agency (FEMA) and the NPCC. ” ***Climate Resiliency and Adaptation Goal 5***
Advocate for a 21st century working waterfront. Explore opportunities to reinvent and realign administrative processes, from permitting to building codes, to encourage planning and investment in modernized, resilient waterfront infrastructure and maintaining our infrastructure in a state of good repair. Invest in critical infrastructure to strengthen day-to-day operations of the working waterfront.” ***Waterfront access Goal 1***

Protection of coastal properties and infrastructure from future storm damage is 1. antithetical to managed retreat, 2. very expensive, and 3. ultimately futile and will create needless waste. The money would be better spent if it were used to buy out properties at risk and construct parkland and wetlands. We would arrive at a more sustainable waterfront more quickly and without destruction of property and creation of waste.

5. Improve water quality by implementing planned programs and building upon key agency and public partner collaborations.” ***Water Quality and Natural Resources Goal 1***

More development, as is planned in all the upzonings, equals more water pollution, air pollution, and carbon emissions. NYS DEC is tasked with enforcing the Clean Air and Clean Water Acts in New York State. New York City has been in contravention of both of these since the 1970s. Increasing the population adds more wastewater and more tailpipe pollution as well as carbon. Additional development will not improve water or air quality. It will also generate more waste. It is not clear that the Stormwater Management Program, and similar programs will achieve stated objectives in the face of the many upzoned neighborhoods and increasing number of supertall and tall buildings throughout the City.

We hope that the NYC Waterfront Plan will be revised to reflect the realities stated here and that New York City will adapt incentives to retreat from the coast that have been done elsewhere (see below). We stand ready to help.

Matthew M. Civello, chair, Manhattan Solid Waste Advisory Board
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Precedents for Managed Retreat from the Coast

Canada Tries a Forceful Message for Flood Victims: Live Someplace Else

https://www.nytimes.com/2019/09/10/climate/canada-flood-homes-buyout.html?fbclid=IwAR0rvDW58dp5urnFLYUq6K4ogiMompqT8N9WOJlFfDRzf-jP4RxQQAkOQo0

Nashville has a program of preventative buyouts:
https://www.nytimes.com/2019/07/06/climate/nashville-floods-buybacks.html

TK - In one community in Staten Island, rather than rebuild, residents have ceded their former neighborhood to nature

https://slate.com/technology/2017/10/the-staten-island-community-that-didnt-rebuild-after-sandy.html

Why the Charles doesn't seem to flood as much as other rivers

https://www.universalhub.com/2006/why-charles-doesnt-seem-flood-much-other-rivers

Harris County, TX Home Buyout Program

https://www.hcfcd.org/hurricane-harvey/home-buyout-program/

Austin, TX Home Buyout Program

http://www.austintexas.gov/department/upper-onion-creek-flood-risk-reduction-project

San Francisco Bay Restoration Authority "Clean and Healthy Bay" Parcel Tax, Measure AA

http://www.sfbayrestore.org/overview

A-passes-7970365.phpFlooded Missouri River Towns Wrestle With Their Futures

https://www.wsj.com/articles/flooded-missouri-river-towns-wrestle-with-their-futures-11568194201

Hoboken, NJ RisingTides2015

https://www.dropbox.com/sh/kpnjpmpm91a7rr8/AAC8mp0b1qMhq6GgX1RLw9Ffa?dl=0&preview=Zimmer+Hoboken+RisingTides2015.pdf

The Role Of Managed Retreat In Adapting To Sea Level Rise

https://energyinnovation.org/2018/12/17/the-role-of-managed-retreat-in-adapting-to-sea-level-rise/

California against the sea

https://www.latimes.com/projects/la-me-sea-level-rise-california-coast/

When Is It Time to Retreat from Climate Change?

https://www.newyorker.com/tech/annals-of-technology/when-is-it-time-to-retreat-from-climate-change

CEDAR RIVER FLOOD CONTROL SYSTEM

http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/cedar_river_flood_control_system.php

In New York City, at the beginning of 2018, more than 12,000 apartments were under construction or planned in high-risk flood zones. Some of these buildings are designed to be flood resistant, but their neighborhoods are not, as critics pointed out in The New York Times: "These new buildings might remain unscathed in a flood,they say, but what about the damage caused by the torrent around them?"

https://www.nytimes.com/2018/07/06/realestate/luxury/new-buildings-rise-in-flood-zones.html

Some 1.2 million people in the metropolitan New York region live in coastal surge zones and riverine floodplains at greatest risk of inundation—and, the Lincoln Institute for Land Policy reported, that number is expected to nearly double by 2050 due to sea level rise, increasing frequency and intensity of storms, and population growth.

http://www.rpa.org/article/case-for-managed-retreat-from-flood-zones

Koslov NY.2006.the case for retreat re climate change RisingTides2015

https://climateaccess.org/system/files/The%20Case%20for%20Retreat%20-%20Public%20Culture.%20pdf.pdf

For governments, buying people out once is a far more effective and less expensive means of flood protection than building and maintaining structural defenses, such as levees and seawalls, that will become obsolete as floods worsen and sea levels rise.1 Hard defenses, moreover, have been shown to increase rather than decrease the costs of ooding, since the sense of safety they provide works to attract further development (the so-called levee effect), ultimately placing more people and property at risk. These defenses also have negative impacts on the environment and on neighboring areas to which they displace water (Tobin 1995). Despite these costs, many officials treat unbuilding land and removing it from the market as the greater risk, though the pro ts to be gained from remaining in dangerous places are more uncertain and short-lived than the rewards of retreating from them are (Jacob 2015; Polefka 2013).

Podcast: Liz Koslov, "Mapping Climate Change: Contested Futures in New York City's Flood Zone"

https://cmsw.mit.edu/podcast-liz-koslov-mapping-climate-change-new-york-city/

CAN IT HAPPEN HERE? IMPROVING THE PROSPECT FOR MANAGED RETREAT BY US CITIES

Peter Plastrik & John Cleveland Innovation Network for Communities With funding from the Summit Foundation

http://lifeaftercarbon.net/wp-content/uploads/2019/03/Managed-Retreat-Report-March-2019.pdf

Managed retreat can benefit a city by:

- *Preventing future injuries and loss of life.*
- *Ensuring the availability of roads and other crucial physical infrastructure that have been relocated, which avoids disruption of business.*

- *Avoiding severe financial losses due to damage to property and infrastructure and reducing the cost of responding to, recovering from, and rebuilding after a climate disaster.*
- *Preventing damage to other development and to essential local ecosystems.*
- *Avoiding the devastating damage that can force residents—even entire neighborhoods—to hurriedly and permanently migrate to other places.*
- *Preventing the burden of climate disasters from falling predominately on disadvantaged and low-income residents of the city, who often live in a city's most climate-exposed areas and have limited resources with which to recover (p 18)*

Lessons Learned About Managing Managed Retreat

The limited experience of cities that have taken on managed retreat suggests that an effective process depends on critical actions that move the community from denial and anger to acceptance. It's especially important to reframe retreat as not simply a loss of what was, but as part of a larger and inspiring vision for what can be, for the city's future. Five lessons learned are:

- *A city's community-engagement process for resilience planning should be designed for the emotional and social aspects of considering managed retreat.*
- *A city's assessment of its climate risks and vulnerabilities should expose,not hide, the potential implications for retreat.*
- *Cities should reframe retreat as not just a loss,but as part of a positive and inspiring vision for the city's long-term development and success.*
- *A city can help to normalize retreat by starting with the relocation of essential public infrastructure and revising city rules that steer new development.*
- *Consideration of retreat should include recognition of its potential impacts on economic and social disparities in the city. (p 25)*

Tools for Managed Retreat

Conditional development that establishes a condition for approval of a new development or development, such as removal of structures that are flood-prone, dedication of some land for public purpose or natural preservation, and rezoning. The conditions, known as "exactions," could allow for continued development while preserving the right to require future retreat.

Conservation easements that place permanent restrictions on the uses or allowable development of a property, while allowing the property owner to live on, retain, and develop the property with limitations. Easements are legally recorded and binding on all future property owners. Landowners receive tax deductions or other relief in return for the reduction in value associated with the donated easement. The boundaries of a "rolling" conservation easement automatically moves inland as the shoreline advances.

Floodplain regulations that impose additional restrictions on development in floodplains above the federal National Flood Insurance Program minimum standards, such as limiting types of use and imposing design requirements on sites and buildings. Other policies could limit or disallow public expenditures to build or maintain infrastructure in the 100-year and 500- year floodplains.

Market incentives that land restoration and conservation.payments for ecosystem services for encourage property owners to develop property in certain ways or to provide desired amenities in exchange of economic benefits or services to the owner. "Some communities offer density bonuses or tax relief, abatement, or credits if a developer agrees to include a certain amount of ... open space within a development. Incentives, such as

Transfer of Development Right (TDR) programs, can be used to compensate an owner for giving up the right to develop portions or all of a property. Incentives are often viewed by property owners as a fair way to limit development since he or she receive something in return for any lost privileges."171 Incentives could include

Real estate disclosures that require sellers to reveal information such as foreseeable climate risks—e.g., coastal erosion rates, sea level rise projections, location in floodplain—to potential buyers, fully informing them of the conditions of a property before purchase.

Rebuilding restrictions that limit or prohibit what can be rebuilt on property damaged or destroyed by natural hazards. This could include a post-disaster building moratorium to evaluate and plan redevelopment in vulnerable areas. To determine when rebuilding restrictions are triggered, cities can use the "substantially damaged" rule which says that if repair costs would exceed 50 percent of the pre-damage market value, then rebuilt structures must comply with more stringent zoning.

Setbacks and buffers that require development to leave certain parts of sites to remain undeveloped to, for instance, provide protection from flooding or protect a shoreline. Setbacks can be based on the projected annual average rate of erosion over a specified number of years.

Transferable Development Rights that allows a landowner ("sender") to give up development rights in exchange for compensation from another landowner ("receiver") who wants to increase her development rights. This creates a market that directs development away from high-risk areas.

Zoning that protects environmental features such as wetlands, promotes special development, or discourages or encourage certain densities or intensities of development. The downzoning of permissible uses limits new development or expansion of more intense development in vulnerable areas. development and returning the land to natural condition and preventing future development. Federal and state governments provide funding for buyout programs, mostly post-disaster.