Affect in Resiliency Planning: A Conversation with Broad Channel

by

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ABSTRACT

Planning for climate change is more relevant than ever, as the earth continues to warm, sea levels rise, and no global policy or political will is in sight. In order to plan under hostile circumstances, it is of the utmost importance that planners turn our attention to the hyper-local scale, continuing momentum in our personal and professional relationships. In this thesis, I argue that centering affective experiences of place is essential in conversations about the future of places under climate change, especially in communities and neighborhoods resistant to the conversation about climate change's impacts on their futures in the first place. This project focuses on Broad Channel, the only inhabited island community in New York City's Jamaica Bay, which is on the front lines of sea level rise and tidal flooding in the city. I interviewed city leaders, community members, artists, planners, and activists to understand how we can move through and with affect when considering the future of a place. This can open up conversation about climate change previously inaccessible. These conversations also surfaced the need for planners to regroup and understand how their own affective positions impact difficult conversations about climate change. I offer these insights and recommendations for future resiliency planning work, reflecting both inward and outward.

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Thank you to my thesis advisor, Justin Steil, and reader, Michael Marrella, for your patience, kindness, and support throughout this project. Thank you to all of the folks I interviewed for their time and willingness to share Broad Channel with me. And to my friends and family, for helping me get this project across the finish line.

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Explorations in ecological grief

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I grew up in Florida, just outside of the City of Tampa. At home, hurricanes were familiar and often overlapped with my September birthday. Folks living along Tampa's Bayshore Drive, which rims the basin of Hillsborough Bay, are photographed kayaking through the streets after each hurricane. The streets flood with each hurricane, the infrastructure unable to withstand increasing storm strength.

Fortunately, my family's home has never lied within the hurricane's path of destruction – but this doesn't exclude us from increasing anxieties, which collectively develop in each period of storm preparation. Flooding and coastal inundation induced by sea level rise currently threatens the open green space along the waterfront near my parents' home –complicating their neighborhood's future safe access to the waterfront.[1] Water left a scar on past Tampa Bay landscapes, and rising levels threaten its future.

One might attribute these feelings of anxiety, fear, and sadness for where I've called home the consequence of living in a natural disaster-prone place. Everyone living in Tampa or near the waterfront has accepted the risk of disaster, so why should others be concerned about our feelings? Of course, we've taken the risk on ourselves.

These feelings must only arise in response to extreme events – that they will ebb and flow like the water that floods our streets. For me, and many others who experience ecological grief or anxiety, this is not the case. In my own experience, a deeper-seeded grief and anxiety, more like dread, surfaces because of the increase of red tide on my nearby shores, not because of the hurricanes.

Red tide is caused by an algae, *Karenia brevis*, that thrives in the Gulf of Mexico's warming waters. The algae blooms are toxic to humans and sea life, becoming airborne through crashing waves. Once red tide reaches the coast, now nearly every year, beaches are shut down, too hazardous for human health and safety.[2] My favorite beaches along Anna Maria Island, where coquina shells nestle in the sand and dolphins swim parallel to the shoreline, have dramatically changed. But more and more, my beaches are shut down due to red tide.

Though certainly not gone, Anna Maria Island does not look or feel the same now as it did while growing up there. The beaches are crowded over the summer, traffic is worse on, and getting to, the island, but my memories preserve it, like a sweet jam that gets sweeter with time. It can be difficult to sit in this dissonance – stuck in between the reality of the beaches today, the recognition of how they've changed, and how they will continue to be reshaped, until they are damaged beyond repair. From this, a form of grief emerges that is unique to this time in the Anthropocene. Despite the object of my grief continuing to exist, I grieve in anticipation of future change. I turn to writer and researcher, Moss Berke, to clarify and put words to

1. City of Tampa. n.d. "Sea Level Rise." Are You Ready Tampa Bay? Accessed March 21, 2025.

2. WEDU. 2024. "Red Tide." Sustain | WEDU PBS. July 19, 2024.

Figure 1. Patch of open space along the Hillsborough River, just a few blocks from author's parents' home. Photo by author.

Figure 2. Fallen tree in Riverside Heights after Hurricane Milton. Photo by author.

these feelings, especially for the complexities associated with the future: "The anticipatory dimensions of ecological grief distinguish it not only as a reaction to a specific loss, but as an invitation towards a mode of relating to the unsettling temporality of ecological catastrophe still to come."[3] To move forward, I imagine a future where Anna Maria is protected, parts sectioned off from the public and given the opportunity to readjust to this warmer world.

I aim to explore how to hold that grief through writing instead of rushing past the discomfort and engage with others contending with their ecological grief in their own unique contexts and communities. I also lean on Berke's insistence that our understanding of ecological grief "…must also trouble the regime of neoliberal health and wellness cultures that define grief through capitalist temporalities, constructing it as a process of overcoming losses that necessarily takes place along a path of mythic temporal linearity," to become meaningful, or to meaningfully move with grief. I also wrestle with an "environmental numbness" that Associate Professor of English, Paul Bogard, describes as a Western "tendency to underappreciate the environment in which we find ourselves."[4] Bogard emphasizes the importance of "Having words that describe our emotional attachment to the natural world allows us to recognize that attachment, and to include it in the repertoire of ways in which we understand and experience nature […] it allows us to talk about these experiences to others."

In interviews and throughout my research, I worked with this framing. In questions I posed to interviewees in Broad Channel, I asked them to consider the world around them – whether that be natural, built, or social – while discussing planning for climate resiliency. Before speculating about the future, it was important feel rooted in place. In considering the future of a place, I hoped to impart that losses need not be necessarily overcome to consider our present and future. These

3. Berke, Moss. 2024. "For A Future(s) Against Progress: Bog-Time and the Troubling of Ecological Grief." Journal for Visual Culture, 2024.

4. Bogard, Paul, ed. 2023. Solastalgia: An Anthology of Emotion in a Disappearing World. Charlottesville: University of Virginia Press.

Figure 3. Map of Jamaica Bay. Produced by author.

losses are not losses in fact, but the death we are surrounded by and can learn from – and it's not going to go away soon.

For the purposes of this project, I looked to Jamaica Bay in New York City, to search beyond my own grief and find solace in shared experience. Jamaica Bay, located south of Brooklyn and Queens, is on the frontlines of climate change, like my Anna Maria Island. And atop tidal marshes, approximately 2,300 people live on the only remaining filled in, man-made island in the body of the bay – in a town called Broad

Channel.

Hurricane Sandy brought the force of climate change to Jamaica Bay's shores, making the reality of rising sea levels difficult to ignore. However, the situation in Jamaica Bay is extremely complex – retreat doesn't feel right (it rarely does in climate-impacted communities), but staying will likely be impossible in the near future, not in some far-off future. Contending with this reality introduces a dissonance to the lives of residents, sitting between histories of regular flooding that feels normal and increases in flooding to the point of inhabitability. This is hard to ignore and to understand. Climate change's unique condition as a large, looming, existential threat makes it difficult to confront. And even if you manage to contend with it, paralysis can set in. So, most (understandably) opt for understanding it as a distant threat, too big for them alone to tackle. While it is too big for any individual to challenge, it becomes more and more difficult to ignore when it floods at your doorstep.

Americans are not known to contend with grief in useful ways – we're encouraged to move on, return to normal, as quickly as we can.[5] A grief embodied by floods is something we all see and understand. By tapping into that grief, we strengthen our relationships to each other, starting difficult conversations from a shared space of vulnerability and understanding.

The rest of this document begins to explore these difficult conversations in Broad Channel. I begin by describing an abbreviated history of Broad Channel and Jamaica Bay, focusing on the locally relevant narratives of the last century. In the subsequent essay, I ground climate change to the day-to-day reality of the island, including a look at the landscape of future flooding and the existing resiliency plans. With this context in mind, I offer a reframing for resiliency planning – one that centers affect and emotional attachment to place. The document concludes with a call to planners to apply some of the principles of affective planning to ourselves, and consider our own emotional states and relations with each other before beginning resiliency planning work.

5. In the US, on average, employees are given 3 to 5 days of bereavement leave. This is not mandated by the federal government. TriNet Team. 2023. "Bereavement Leave: An Employer's Guide." October 5, 2023.

Meeting Broad Channel

02

Jamaica Bay, located just south of Brooklyn and mainland Queens, is home to a diverse range of ecosystems – grasslands, woodlands, sand dunes, beaches, ponds, salt marshes and forests all co-exist and thrive here. Birders flock to the Bay to catch sight of one of the hundreds of prized species of migratory birds that pause and pass through. Beach plums, black cherries, and prickly pear cacti are all native to the Bay's shores, and poison ivy's limbs tether the shore's sands, maintaining island shapes.[1] An ecosystem thrives in Jamaica Bay, which includes the many people living, swimming, boating, and fishing there. When you consider the elevations across New York City, it also becomes abundantly clear that it is the lowest-lying region, and home to those most susceptible to coastal flooding.

Residents living along the bayside coast – whether that be on the Rockaways peninsula, attached to mainland Brooklyn and Queens, or on the only

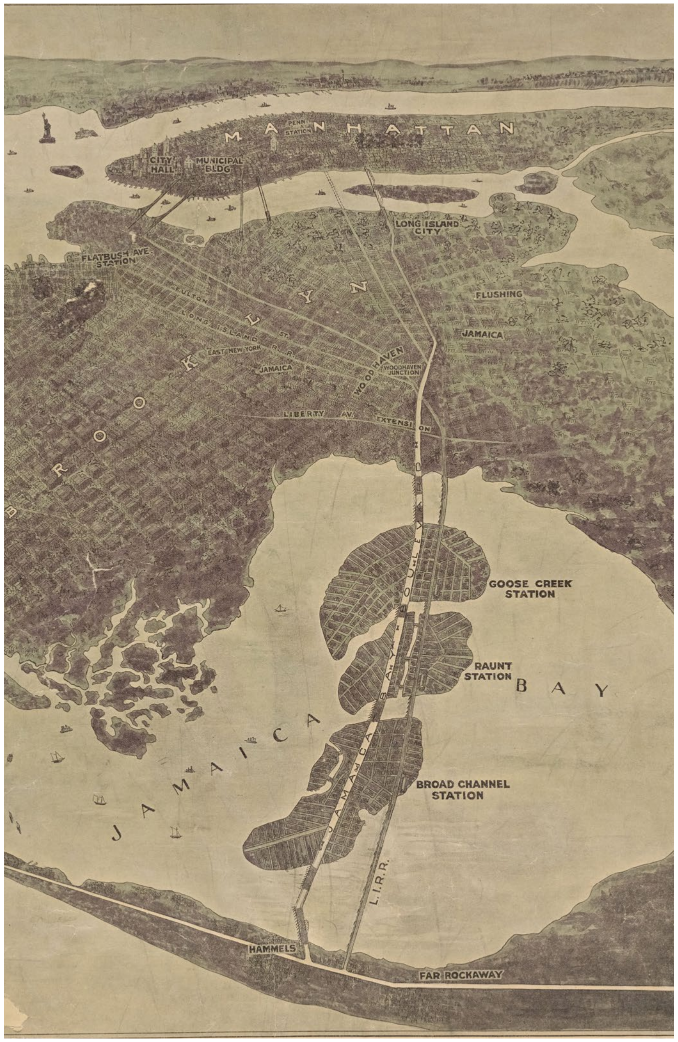

Figure 4. "Birdseye View of Greater New York Showing Jamaica Bay." 1915. New York Public Library Digital Collections.

Figure 5. Hassler, William Davis. Unidentified Beach Bungalows, (Broad Channel, Queens?). 1917. New-York Historical Society, Photographs of New York City and Beyond.

inhabited island, Broad Channel – often share their appreciation for the natural world unprompted. Despite mainland New Yorkers living and working within a short distance to this same natural site, many don't think twice about their relationship to the land, other than to the concrete beneath their feet. A different kind of lifestyle permeates these watery homes and habitats within the Bay, one that is more interested in and connected to the nature that surrounds them.

A brief history of Jamaica Bay

Before Dutch colonization, Jamaica Bay was part of Lenapehoking, the homeland of the Canarsie and Rockaways Lenape people.[2] During this time under Lenape tenure, the Bay functioned as a wetland estuary. After the 1600s and the arrival of colonization, beginning with the Dutch and followed by subsequent colonizers, the Bay's natural ecosystem's wealth was extracted for the next 300 years. Teeming with life, fisherman flocked to the Bay for oysters, menhaden, clams, and sharks. The coastal land itself also proved to be fertile manufacturing grounds – factories for fish

1. National Park Service. 2025. "Plants - The Ecology of the New York Harbor." March 27, 2025.

2. Native Land Digital. 2018. "Lenapehoking (Lenni-Lenape)." Native-Land.ca | Our Home on Native Land. July 26, 2018.

oil and fertilizer production sprouted up along the shoreline.

In the mid-1800s, following the rapid industrialization and urbanization of the city, contaminants began leaking into the Bay's waters. A number of refuse facilities dotted the shore, dumping waste into the water every day until 1934.[3] Despite the polluted waters, the Bay simultaneously became a popular destination for tourism during this time. New Yorkers flocked to the water – demand for the tourism industry skyrocketed. The Long Island Railroad was extended across the waters in 1880, connecting mainland Brooklyn and Queens to the peninsula and inhabited islands. The rail's development, in combination with private pressures and through the vehicle of governmental authority, shaped much of the natural wetlands into what exists today. Sands were dredged and marshes were filled – all in the name of development and industry's expansion into the Bay. As a result, more than 80 percent of the Bay's salt marshes were filled in over the past two centuries. This erased an important naturally occurring flood barrier and has had major consequences for coastal flooding today.

Enter the most notorious planner of New York City (and perhaps all of the U.S.): Robert Moses. Moses was responsible for planning many of the region's most renowned parks during the time, including three on Long Island and the respective driving parkways to reach them. Uninterested in mass transit, Moses focused on making spaces accessible to "pleasure vehicles," or individual vehicles for private parties.

In 1936, Moses' control increased over the fate of Jamaica Bay, as he was selected to head the Marine Parkway Authority, the agency that constructed essential passenger vehicle bridges that connected the Bay and paid for the construction of Jacob Riis Park along the Rockaways coast. Just two years later, Moses transferred the management of the Bay to the New York City Parks Department.[4] In the 1960s, Moses attempted to convert all of Broad Channel into one leisure park, with the intention to evict all existing residents, but was unsuccessful.[5]

3. National Park Service. 2022. "Introducing Jamaica Bay." Northeast Coastal and Barrier Inventory & Monitoring Network. March 25, 2022.

4. National Park Service. 2021. "Robert Moses Biography." January 22, 2021.

5. Bashinsky, Ruth. 2018. "This Land Is Their Land: Broad Channel's Ownership Revolution." Daily News, April 9, 2018.

Speaking with the Islanders

For this project, I spoke with several community leaders in Broad Channel. Among them were:

- Dan Mundy Jr., vice president of the Jamaica Bay EcoWatchers and president of the Broad Channel Civic Association,
- Don Riepe, the Jamaica Bay Guardian for the American Littoral Society,
- Margaret Wagner, co-chair of the Broad Channel Historical Society, and
- Dan Guarino, also co-chair of the Broad Channel Historical Society.

Outside of Broad Channel residents, I spoke with leaders in other Jamaica Bay communities – Doug McPherson at ReAL Edgemere Community Land Trust and Roger Gendron, president of the Hamilton Beach Civic Association. For a bird's eye policy perspective, I met with Tom Klein and Tyler Taba at the Waterfront Alliance. I was also interested in learning more about unique forms of community engagement, especially those that engage with our emotional sensibilities, like that of Clarinda Mac Low and Carolyn Hall's Sunk Shore project, and Sabina Sethi Unni's climate-driven theater practice.

In interviews with Broad Channel residents, I asked community leaders about their relationship to the island: what their professional and community roles look like, how long they've lived there, and what they like about living in Broad Channel. For more, see Appendix A. From this foundation, we discussed flooding and whether they think residents perceive the impacts of climate change on the island, what they hope the future of Broad Channel looks like, and what

Figure 6. Lingering water on Broad Channel walking tour. Photo by author.

Figure 7. Flood protection measures. Photo by author.

they see as an ideal relationship between the island and city officials moving forward.

With planning and policy professionals, I asked them about what community engagement regarding climate change typically looks like, whether they hear from New York City coastal community members about sea level rise, and how they approach emotional conversations that come up around planning for the future. And with artists, I wanted to learn more about their engagement practices. Because of the nature of their work, they conducted more experimental forms of community engagement, so I wanted to know more about what surfaced in their conversations about climate change, and how they broach difficult subjects.

These conversations provided me with a small window into the daily lives of folks living on the island, and how those experiences fit into the bigger picture. I heard about how people boat, swim, fish, and admire their views of the water from Broad Channel. I found that the Bay features centrally in many residents' imaginings of home. Often, they are completely unfamiliar with living without it. Community members cherish the waters and the privilege to live nearby. The water is tied to many people's identities there, often across and through many familial generations.

"So it's [Jamaica Bay] constantly in the background of all of our lives. It's part of our lives. I think it has something to do with also the way people generally are, which is kind of more relaxed, more laid back in general." – Dan Guarino

Broad Channel Today

Today, Jamaica Bay is one of three areas in the Gateway National Recreation Area, managed by the National Parks Service. It also holds 200 million gallons of New York City's treated wastewater. In a city of over 8 million people, approximately 3 million live within the Jamaica Bay watershed.[6]

In Broad Channel, the lowest lying place in New York

Figure 8. Percent white residents, Broad Channel. Source: ACS 5-year Census data (2017-2022).

and the focus of this project, there are just over 2,300 residents. Compared to its neighbors, Broad Channel is much more racially homogenous – the vast majority of its residents, or 87 percent, are white. In both Kings and Queens County, white residents make up less than half of the population. Many residents consider themselves working and middle class, but the actual median household income for the island is $103,333 (in 2022) demonstrating that incomes are greater in Broad Channel than for that of its surrounding neighborhoods. For instance, Queens County's median household income was $82,431 and Kings County's was $74,692 in 2022. For these reasons, the island community does not qualify as an environmental justice community per New York state definitions.[7] However, of all NYC neighborhoods, it is the one at the most immediate risk to coastal flooding due to climate change. In fact, during my own short trip to Broad Channel, I saw where the water lingered on the streets and in the green spaces, even on a day with blue skies.

Staying in place was hard-earned by Broad Channel. In 1915, when Pierre Nobel began leasing all the land from New York City for a beach resort, the fight began. Residents of Broad Channel brought legal battles to the city for the next 67 years, under threat of eviction and expulsion. Residents couldn't obtain a mortgage or bank loan to begin the home ownership process because they lived in Broad Channel.

Planes buzz overhead and punctuate the skyline, a constant reminder of the airport's presence. In the 1960s, the island fended off an attempt by the Port Authority to expand JFK's runways across the Bay and straight over the island community. Recent attempts to expand the airport's property have faced fierce resistance from Jamaica Bay advocacy organizations, often originating from individual activists in Broad Channel.[8] These fights are motivated by the drive to protect the ecological health of the Bay and preserve this natural gem for the city, over the expansion of the regional airport.

In 1982, the city ultimately granted Broad Channel residents the right to purchase their land.[9] The legacy of this fight lives on today. Many adult residents of the island remember their parents advocating for the right to purchase their land. It instills a sense of pride and commitment to the place. When I asked Margaret Wagner why the island has such a strong, unified identity, she described witnessing the events of 9/11 from across the Bay but emphasized that for the older residents, "it was the fight for the land sale that everyone had get together to help buy the land they were on from city hall. And some of that still is within our community." Since so many older residents still live on the island and established family units there, that legacy – or perhaps, mythology of place – lives through their relatives.

Many in Broad Channel are multi-generational residents – often the great-grandchildren of former residents or grandparents themselves, living down the street from their children and their children's children. People stay in Broad Channel – it's not common for folks to move away and newcomers are rare. Many families have invested time and energy towards the

6. NY Sea Grant. n.d. "Jamaica Bay." Accessed March 26, 2025.

7. Department of Environmental Conservation. n.d. "Environmental Justice." Department of Environmental Conservation. Accessed May 13, 2025.

8. Ward, Christopher O. 2011. "Letter of Opposition to Runway Expansion Plan," March 17, 2011.

9. Guarino, Dan. 2024. "Lights, Camera, Broad Channel!" The Rockaway Times, March 7, 2024.

efforts to stay on the island, translating into strong multigenerational family units.

This small island community is unique in many ways, and especially unique in New York City. Being the only inhabited island, frequently under threat of displacement (whether that be due to social, natural, or governmental pressures), and made up of many of the same families that first built homes there, residents have strong emotional ties to the land and the people they share the land with. These factors and the physical limitations of the land – being a literal island – create an insular culture and "small town" feel.

But these deeply entrenched attitudes can also create a resistance to change, like the lack of recognition of climate change's impacts on the future of the island's inhabitants. Rather than contending with the extremely difficult reality of an island that will no longer be safe to inhabit, islanders push the city to consider all possible other options, which will likely only delay the inevitable. It's difficult to imagine how a theoretical threat will force individuals to change, and even harder for the individuals to accept that it will change the shape of the place they call home. For change to be possible, the fears about futures where residents cannot stay on the island cannot be ignored. Will they stay together? What do they lose by moving? And for planners to consider, what do they gain by moving?

Hurricane Sandy

Like many other New York City communities, Broad Channel did not anticipate the size and intensity of Hurricane Sandy. By the time Sandy made landfall in New York late in the day on October 29th, 2012, its status was downgraded from hurricane to superstorm. But despite this change in title, winds remained over 70 miles per hour and storm surges of up to 14 feet battered the city's coastline.[10]

Broad Channel's low-lying nature and island form made it particularly vulnerable to these impacts.

Figure 9. Superstorm Sandy's Path. Source: Fox News Radio.

Many had not evacuated by the time the storm hit and impacts on the isolated community were massive. According to Dan Mundy Jr., "... it was like an earthquake hit. I can't overstress that because we're an island, the police department washed away, the fire department washed away."

According to the City's Sandy Funding Tracker, Broad Channel's Community District received a federal reimbursement of over $750 million, and more than 2,500 single-family homes were applicants. While it is not possible to discern a level of granularity at the town level, because the island was within the Sandy inundation zone, many Broad Channel residents likely account for these sums.[11] Dan Mundy Jr. described some of the destruction after the storm, sharing that nearly every home on the island was flooded on at least the first floor.

At the time of the disaster, emotions were high, and reactions were sharp. Not only was existing on-island support no longer available because it was partially washed away – federal FEMA support was also nonexistent, as concerns for safety prevented aid from reaching the island. With community organizing at the American Legion and the Broad Channel Civic Association, aid eventually began to

10. NYC Recovery. n.d. "Sandy Funding Tracker: Housing & Business Applications."

11. Ibid.

12. Gregory, Kia. 2013. "Where Streets Flood With the Tide, a Debate Over City Aid." The New York Times, July 9, 2013, sec. New York.

flow onto the island. FEMA ultimately made its way to Broad Channel; Build It Back was established shortly thereafter by the Bloomberg administration. An additional, $22 million were set aside to bulk up the island's flooding defenses by the city.[12] Immediately thereafter, questions from non-residents sprung up: why were significant taxpayer dollars being invested in a neighborhood that will likely not be able to survive forever, or even the near future?

For many on the island, Dan Guarino describes Sandy as a "demarcation point." Sandy's impact quickly comes up in any conversation you have with Broad Channel residents about the frequent flooding they experience today. Post-Sandy, just a handful of households packed up and moved further inland. Like many other communities susceptible to coastal flooding, anecdotally, managed retreat is unpopular in Broad Channel.[13] Despite Sandy's earlier sharp emotional impact, now, over a decade later, the passage of time has numbed many from the visceral impact of their wounds from Sandy. But the underlying, unconscious emotional impact, and as some described, trauma, lives on.

"And one of the things that was very recognized [was that] everybody here is going through PTSD. I mean, the entire [island], it wasn't like, something just happened to your house. And you're going to come back, something happened to your car, and you go home, it's like everything – your house, your home, your life, and everybody around you – the entire community [was] up in the air. There's some pieces never landing, frankly. So there was a lot of trauma."

- Dan Guarino

With the $22 million dollars bestowed upon Broad Channel, the city constructed new breakwaters to protect the island's edges and street ends and raised several streets three feet. Many homes had already been raised prior to Sandy because of the flooding risks, but

13. Mulkern, Anne C. 2021. "Managed Retreat: Unpopular, Expensive and Not Going Away." E&E News by POLITICO. November 5, 2021.

others were able to rebuild or raise their houses above future tidal flooding using funding from Build It Back. But even with this financial support from the city, many Broad Channel residents took it upon themselves to rebuild, refusing aid. This, perhaps, further speaks to life here – living on the edge (literally and figuratively) and the assumed responsibilities that accompany those choices. Summed up by Dan Guarino, "the environment [of Jamaica Bay], it's not an academic thought, it's not a theoretical thought. It is part of our lives. It changes; we change."

Climate change in Broad Channel

Despite Broad Channel's low elevation status and familiarity with natural disaster, concerns I heard from residents were restrained regarding the future impact of climate change on their community. Broad Channel is one among a few communities in Jamaica Bay most susceptible to expected increase in near-term coastal flooding. Sea levels are estimated to rise globally by nearly a foot in the next 30 years. Without significant action towards slowing global warming now, the global sea level could rise by an average of 6 to 7 feet by the end of the century.[14]

Broad political action does not currently have enough momentum to significantly slow global warming, so it is not unreasonable to plan for the future of the city's waterfront with these estimates in mind. Understandably, the estimates feel hyperbolic. What does 6 to 7 feet on average look like in the context of Broad Channel? It can feel unimaginable – difficult to visualize in context. Because there is little broad political will, it is important to consider how these impact places at a local scale so that communities can prepare appropriately for possibilities for their future(s).

As many Broad Channel residents are aware, their community is already highly susceptible to what the National Oceanic Service defines as "frequent


Figure 10. "Tidal flooding occurs about twice a month in Broad Channel, Queens, one of the lowest-lying areas in New York City." Photo courtesy of Robert Stolarik for The New York Times.

minor floods," or high-tide flooding. A number of times throughout the year, when the moon's forces are aligned, flooding on the island disrupts regular activities, making it impossible for children to get to school on time or adults to work. This type of flooding is particularly acute in Broad Channel, putting it on the frontlines of the impending crisis. But unlike other areas of Jamaica Bay that have also begun to experience increases in flooding frequency, residents on the island are used to seeing flooding events multiple times throughout the year.

Like many other Americans, some people living in Broad Channel feel that language about climate change is hyperbolic and that future predictions are over exaggerated.[15] According to Broad Channel Civic Association president, Dan Mundy Jr., "Those over-exaggerations hurt, because then [someone] goes, 'Okay, it doesn't happen. Well, then, it's all bullshit,' you know, and it's not bullshit." He strongly cautioned against using figures that were not meaningful or accessible to a broad, public audience: "I do think local people will follow along if you give them an opportunity, and you don't get too deep into the weeds."

Relatedly, simplified narratives can hurt public perception of climate realities. There is a fine line for climate experts and policymakers between the importance of urgent action and being upfront and clear about uncertainties that are inherent to making predictions about the future. Introducing uncertainty may complicate a narrative and make convincing a community with a diverse set of opinions more challenging. But without honesty about the uncertainty, the public still sees through simplified narratives when the described impacts of climate change don't come to fruition, which can lose the public's trust in future engagement with government officials. This, however, does not mean that Broad Channel residents are stuck, unwilling to change. Several streets on the island voted to raise their street to mitigate the impacts of high-tide flooding – the recognition of a problem certainly exists.

Many places across the country feel a sense of defensiveness when they hear about climate change's impacts on their immediate surroundings. Because of the gradual nature of this global catastrophe, it can be extremely challenging to recognize how this shows up around oneself. Given the multigenerational and environmentally-connected nature of Broad Channel, it might actually be more primed to observe changes to the climate, regardless of political alignment. According to Don Riepe, Jamaica Bay Guardian, "I know that the sea level is rising [...] I can go online and I can get the measurement of the predicted height, high tide. And that's been going up like an inch and a half or so a decade. A couple of times a year we have tides at over seven feet, which 20 years ago we didn't have [that], you know?"

Across the bay in Hamilton Beach, Roger Gendron, civic association president and multigenerational resident, said this about flooding changes in his community: "When I was a kid growing up, [flooding] happened two or three times a year. Now there are times there'll be water in the street six, seven, eight times, ten times a year. Sometimes it's multiple days. Sometimes we go months on end without any."

Interestingly, this directly contrasts with long-time

14. Sweet, William V., Benjamin D. Hamlington, Robert E. Kopp, Christopher P. Weaver, Patrick L. Barnard, David Bekaert, William Brooks, et al. 2022. "Global and Regional Sea Level Rise Scenarios for the United States." NOAA Technical Report NOS 01, February.

15. Pasquini, Giancarlo, Alison Spencer, Alec Tyson, and Cary Funk. 2023. "Why Some Americans Do Not See Urgency on Climate Change." Pew Research Center (blog). August 9, 2023.

Broad Channel resident Margaret Wagner's sentiments about flooding when her street considered joining the shared streets plan, which would raise the road's height by three feet: "And the consensus [to not raise the street] was, maybe we don't need it because we only flood maybe seven times a year." In Margaret's street's case, compared to other streets on the island that did vote to raise their street, most of the residents are older adults who were nervous about the impacts of construction on their physical limitations (navigating over uneven surfaces, easily getting in and out of their homes, etc.). But the tolerance for frequent flooding events nods to a level of desensitization on the island.

On adjacent streets in Broad Channel, different groups of people came to different conclusions. These street-by-street differences clearly illustrate the impacts of their climate resiliency efforts, or lack thereof. Compared to adjacent streets, Margaret's showed evidence of water on a sunny day, and erosion and potholes likely due to the frequent presence of water.

Existing and Ongoing Resiliency Strategies in the Bay

Before Sandy hit Broad Channel, plans were already underway to fortify the island from tidal flooding. In 2020, phase I was completed, which included raised streets and almost a half mile of new storm sewers to combat flooding, with a total cost of $46 million. Through a collaboration between the Department of Environmental Protection, the Department of Transportation, and the Department of Design and Construction, three streets – West 11th Road, West 12th Road, and West 13th Road – were raised three feet and bulkheads installed at their dead ends. Completed in 2024, Phase II brought raised shared streets and bulkheads to West 14th Road through West 17th Road, in addition to significant improvements to stormwater management infrastructure and enhanced pedestrian safety.[16]

16. NYC Department of Design and Construction. 2024. "City Completes Phase II of Broad Channel Project, Raising Streets and Adding New Sewers and Bulkheads." NYC Department of Design and Construction. October 25, 2024.

17. McCue, Dan. 2022. "Army Corps Proposes $52B 'Sea Gate' Plan to Protect New York From Storm Surge." The Well News (blog). September 27, 2022.

18. Waterfront Alliance. n.d. "Rise 2 Resilience." Waterfront Alliance. Accessed April 6, 2025.

Now, a new massive infrastructure project looms on the horizon for residents of Jamaica Bay: the sea gate. Proposed by the U.S. Army Corps of Engineers, the sea gate(s) would seal the Bay, theoretically preventing future storm surge. The Corps' original proposal involved a single, large, moveable gate stretching across the outer New York Harbor, anchored by the end of the Rockaway peninsula and Sandy Hook in New Jersey.[17] Originally priced at $119 billion, the first Trump administration refused to fund the project due to its cost and doubts over its viability. Back to the drawing board, the Corps put forth its current plan in 2022, which includes over a dozen smaller, moveable sea barriers scattered across the New York Harbor, the construction of levees and berms, and dozens of miles of floodwalls.

According to the Corps' proposed timeline, final designs for the plan should begin in 2025 with construction kicking off in 2030. At the time of writing, details of these proposed designs are not yet publicly available. Under the second and current Trump administration, we've seen executive orders threaten and cut funding regularly and erratically. This has likely put the status of the Corps' work further in jeopardy.

Regardless of the iteration of the proposal, the Corps' project has consistently faced sharp criticism from the public and leading advocacy groups. Led by the Waterfront Alliance, Rise 2 Resilience (R2R) is a coalition of over 400 New York leaders interested in "build[ing] consensus on a comprehensive set of policies and investments needed to build regional resilience."[18] In response to what the coalition viewed as subpar community engagement by the Corps, organizers operate as a united counterbalance to the ambitious infrastructural machine. R2R's work has also encouraged the Corps to evaluate other alternative nature-based solutions in addition to the proposed infrastructure, like the restoration of wetlands, before continuing its singular grey infrastructure trajectory.

In alignment with Berke, R2R advocates for the importance of a deep understanding of the ecological systems in Jamaica Bay, considering them as "…a more-than-human thinking partner may be equipped to help 'evade assumptions that the future is a singular direction ahead.'" Not only does R2R push the Corps to seriously include community members in its proposed plans, but it also asks the organization to reconsider the ecosystem of the Bay as a partner in protecting this natural resource. There is more than one, singular way forward.

Additionally, the Corps' proposals rely on the results of its New York-New Jersey Harbor and Tributaries Study (NYNJHATS), which only focuses on risks associated with severe flood and extreme storm events.[19] As pointed out by R2R, NYNJHATS does not account for sea level rise, extreme rainfall, and nuisance flooding – all of which are major gaps if the Corps intends to construct such a large, expensive project. R2R suggests expanding the study's scope to include "stronger community engagement, an iterative approach, and holistic solutions that includes green, grey, and non structural solutions."[20]

The coalition also expressed concern for the impacts of the sediment flow on the remaining marshlands in the Bay. Many critics feel that the NYNJHATS did not seriously consider the downstream impacts on the marshes.[21] A 2022 study found that marshes act as an important barrier for the Bay, absorbing water's impact and slowing wave movement before reaching land, which supports R2R's stance on including forms of "green infrastructure" to plan for the future of the Bay.[22]

In contrast to this work by R2R, some of the Bay's most outspoken advocates and defenders find their progress stalled by R2R's efforts. Because of the advocacy from R2R, some leaders feel that plans for essential protective infrastructure have unnecessarily slowed. According to Dan Mundy Jr., leader of many wetlands' restoration efforts in the Bay, "[...] they'll say the wetlands are gonna save everybody and I'm like, 'look, I'm the wetlands guy. I've used every argument [you can] make to get more and more funding for wetlands. That's not true.'" Dan has correctly sounded the alarm bells before, without being taken seriously. In the 1990s, he was among the first to bring the state of the shrinking wetlands to the attention of the city, only to be dismissed by officials. Soon after, the state's Department of Environmental Conservation conducted its own analysis and found that the bay was losing more than 50 acres of wetlands per year as a result of erosion.[23] Though Dan has dealt with this kind of reaction from city leaders before, is he still correct today?

At this point, pending updates to the NYNJHATS, final designs, or funding changes from the federal government, it's difficult to predict how infrastructural projects will proceed. Helpfully, the Waterfront Alliance published a guide for future work with the Corps, which suggests ways that engagement could be strengthened. They emphasize the importance of early engagement, building strong coalitions with diverse stakeholders, and quiet advocacy outside of formal processes, among other strategies to work better with the Corps.[24]

Figure 11. Remains of a home that washed away during Sandy. Photo by author.

19. U.S. Army Corps of Engineers New York District. 2022. "New York-New Jersey Harbor and Tributaries Coastal Storm Risk Management Feasibility Study."

20. Taba, Tyler. 2023. "What Exactly Is the New York-New Jersey Harbor and Tributaries Study (NYNJHATS)?" Waterwire (blog). January 26, 2023.

21. Guerra, Elias. 2024. "The Army Corps Wants to Protect Jamaica Bay from Climate Change. Environmentalists Say They Might Ruin It in the Process." City & State NY. February 12, 2024.

22. Pareja-Roman, L. Fernando, P. M. Orton, and S. A. Talke. 2023. "Effect of Estuary Urbanization on Tidal Dynamics and High Tide Flooding in a Coastal Lagoon." Journal of Geophysical Research: Oceans 128 (1): e2022JC018777.

23. Schiffman, Richard. 2022a. "Is This the Last Generation to Live on New York City's Wild Fringes?" The New York Times, April 1, 2022, sec. New York.

24. Taba, Tyler. 2023. "What Exactly Is the New York-New Jersey Harbor and Tributaries Study (NYNJHATS)?" Waterwire (blog). January 26, 2023.

Perspectives for what to do with the Bay are wide-ranging. For the Corps, the best path forward relies on grey infrastructure, made up of a collection of sea gates that are deployed in response to storm surge. For Rise2Resilience, infrastructural proposals should take a step back, engage with the impacted communities and consider alternative green infrastructural solutions. For some advocates on Broad Channel, who have a history of supporting earlier green infrastructure efforts, plans should move more quickly, and being open to grey infrastructure is essential. Another option hangs like an elephant in the room – the possibility of voluntary buyouts.

Towards Broad Channel's Future?

The future of Broad Channel is a watery one. The inundation by Sandy previewed Mother Nature's strength, but future flooding will increase at a more gradual progression. Under the lowest estimate of sea level rise for the 2050s, on Broad Channel, land west of Cross Bay Boulevard will be more impacted by high tides, likely crawling further and further inland. By the 2080s, most of Broad Channel's existing land mass will likely be flooded under the lowest estimates.[25] This future can be disturbing and difficult to conceptualize. The next 50 years will be crucial in determining the fates and futures of the families currently residing on the island. With or without acceptance, retreat may need to be seriously considered.

25. "NYC Flood Hazard Mapper." n.d. Accessed April 22, 2025.

Affect on the island

03

Before resiliency planning begins, we should consider the contradictions inherent to the field: "Planning is inexorably caught between imagination and capacity, between desire and control, between dreaming and managing, but also between the present and the future, between developers and communities, and between the material and the emotional."[1] Another could be added to the list – between urgency and gradual change. What would it be like to start thinking about resiliency between the material and the emotional?

Existing Climate Resiliency Plans

City plans for the broader Jamaica Bay are abundant, and Broad Channel is frequently spotlighted. In 2017, the NYC Department of City Planning's (DCP) Resilient Neighborhoods plan included a section on zoning policy for Old Howard Beach, Hamilton Beach, and Broad Channe, focused on resiliency. This study suggested design guidelines to future residential adaptation for floods, and zoning suggestions to prepare for a more resilient future. Such suggestions included policy recommendations like zoning for immediate housing needs while simultaneously preventing future density due to increasing flood risk, and strategies for storm readiness and adaptive use of vacant, city-owned lots.

Some of this can be seen in action on the island. Vacant lots are regularly transferred to the city for environmental protection and remediation purposes. Margaret Wagner sees this down the street from her waterfront property: "…the civic felt it would be better maybe if we put it in parks department, that it would never be developed. So we have a large piece on my block. That's just all vacant lands." As Margaret goes on to describe, the vacant lot has been blocked off from people's individual use. Some residents tried to park their boats on the lot but were quickly turned away by the Parks department and the Broad Channel Civic Association. Tides frequently flood the lot. The space is slowly being reclaimed as the ecosystem's territory.

In the NYC Comprehensive Waterfront Plan (2020), Broad Channel's wetlands restoration project and raised streets are referenced as leading examples in climate resiliency efforts. This document primarily addresses Jamaica Bay holistically, treating it as a large waterfront system prized for its successful ecosystem restoration efforts and promotion of local biodiversity.

PlaNYC (2023) focused explicitly on improving sustainability efforts in the City. The document proposes an initiative to "launch a voluntary housing mobility and land acquisition program to provide housing counseling and facilitate future land acquisition with Federal and State funds, " to align with the City's objective to protect New Yorkers from increased coastal flooding.[2] The plan outlines some criteria the city could use to identify qualifying communities for this voluntary buy-out program: "…properties in areas with the highest coastal and stormwater flood risk and where other options to reduce flood vulnerabilities are limited." Although not explicitly mentioned, Broad Channel is an ideal candidate for this program, given the community's coastal flood risk and limited options to significantly improve their vulnerable position. At the time of writing, this proposal has not yet been expanded upon publicly.

FloodNet sensors, which measure the height of water during flood incidents, are also found on the island. Two sensors are located on the island – one on the corner of West 16th Road and Cross Bay Boulevard and another at the intersection of Church Road and East 7th Road. These devices are part of an ongoing collaboration between New York University, the City University of New York, and the New York City government agencies to collect and share data with the public on flooding across the City. With these data as tools, FloodNet aims to support flood risk mitigation efforts, strengthening individuals' knowledge and a community's resilience to floods. Anyone can access the FloodNet website, which visualizes flood data from each of the sensor locations.

The Changing Landscape

As of 2025, no focused studies or resiliency plans have been drafted for Broad Channel in nearly a decade. Many other communities across New York City have developed their own climate resiliency plans post-Sandy (and within the past decade), but Broad Channel is not one of them.[3] In 2023, Broad Channel's neighbors at RISE Rockaway developed a "Greater Rockaway" Coastal Resilience Plan. This plan focuses on the dunes along the Atlantic shoreline, and resiliency is defined as the prioritization of local voices, biodiversity, and long-term stewardship.[4] The need for an honest, realistic conversation about the future of Broad Channel now is more important than ever, especially given that federal funding for disaster support was recently slashed for

1. Marotta, Steve, and Austin Cummings. 2019. "Planning Affectively: Power, Affect, and Images of the Future." Planning Theory 18 (2): 191–213.

2. The City of New York. 2023. "PlaNYC: Getting Sustainability Done."

3. Regional Plan Association. n.d. "NYC Climate Resilience Plan Mapper." Accessed April 22, 2025.

4. Rockaway Initiative for Sustainability and Equity. n.d. "'Greater Rockaway' Coastal Resilience Plan." RISE. Accessed April 22, 2025.

New York by the second Trump administration.[5]

Recent research pushes the issue further. A report by the Regional Planning Agency indicates that 80,000 homes in the New York area could be lost to flooding in the next 15 years, which will likely include homes in Broad Channel.[6] Of the boroughs in New York City, Queens will lose the most housing units due to flood loss by 2040. In total, it is estimated that Queens will need approximately 10,000 new units because of housing loss due to flooding.[7]

While it is known that action is more urgent now than ever before, a lack of political momentum on the island, will likely complicate any expedient progress. Interviews with community members and local leaders In order to challenge collective stalling, efforts to protect community members will need to be originated from the ground up – straight from the watery streets of Broad Channel.

Towards affective planning in Broad Channel and Jamaica Bay

In the following section, the word "affect" is used to describe emotion, but also the way that emotional attachment to place creates an atmosphere that is particular and unique to those that experience it. In planning theory, affective planning is a method of planning that centers emotional experiences of place and attempts to bridge between the emotional and material world of the built environment. Planner and academic, Howell Baum, urges the use of affective planning to resist a Western cultural planning urge for maintaining order and instead, to engage with the emotional experience of place in all its messy, complex, and irrational forms.[8]

Affective planning also seeks to comprehend people's attachment to a place and the associated atmospheric textures and characteristics. With this knowledge, planners can develop a deeper understanding of the stakes involved in planning decisions. But Professor

5. Oreskes, Benjamin, Dana Rubinstein, and Grace Ashford. 2025. "FEMA Cuts More Than $300 Million in Disaster Prevention Aid to New York." The New York Times, April 7, 2025, sec. New York.

6. Zaveri, Mihir, and Hilary Howard. 2025. "In 15 Years, 80,000 Homes in the New York Area May Be Lost to Flooding." The New York Times, April 7, 2025, sec. New York.

7. Gates, Moses, Marcel Negret, Robert Freudenberg, Ellis Calvin, Christine Garner, Sojung Kim, Maulin Mehta, and Sara C. Bronin. n.d. "Averting Crisis: Zoning to Create Resilient Homes for All." Accessed April 7, 2025.

8. Baum, Howell. 2015. "Planning with Half a Mind: Why Planners Resist Emotion." Planning Theory & Practice 16 (4): 498–516.

of Politics and Organization, Cameron Duff, cautions against defining affect in affective planning as just emotion: "Affect must, for this reason, be defined more broadly than emotion [...] Instead, affect ought to be understood as a specific manifestation of a body's 'power of acting', its lived force or action-potential for every affect is experienced both as a particular feeling state and as a distinctive variation in one's willingness or capacity to act in response to that state[.]"[9] In Broad Channel, this action-potential is apparent in residents' willingness to act in response to discomfort and fear prompted by the suggestion of managed retreat, and in the less forceful (but still present) resistance to raising some streets three feet. To further clarify, the fear or discomfort experienced likely originates from attachment to where they currently call home, and have called home for their entire lives.

Both strategies address the same problem in Broad Channel – threats posed to the safety of people and homes due to flooding. One takes the threat more seriously (managed retreat) and the other acts as a temporary resolution (street raising), yet both faced resistance. In this case, the action-potential of residents in response to managed retreat is much larger than the response to street raising. And because the action-potential was more manageable, residents came together, street by street, and decided for themselves whether they wanted to reduce flooding by raising streets – the vast majority successfully did so. Resiliency planning needs not only to address discomfort emotionally experienced by residents, but also the town's willingness to respond to that feeling. Planners can learn how to tap into that action-potential to support the town's people's futures.

In 2013, Broad Channel's nearby neighbors in Oakwood Beach on Staten Island implemented the first successful urban managed retreat following Superstorm Sandy. A local buyout committee brought the community together, making the decision to move

9. Duff, Cameron. 2010. "On the Role of Affect and Practice in the Production of Place." Environment and Planning D: Society and Space 28 (5): 881–95.

forward with buyouts as a united front. Residents were assured by the program that the land would be returned to the environment and protected from future development, with the stated goal being wetlands restoration. Many viewed their buyout as a sacrifice they made to the power of Mother Nature.

Ten years later, on the tenth anniversary of Sandy reaching land in Staten Island, the Staten Island Youth Soccer league broke ground on the same land where former residents' homes were bulldozed.[10] Some former Oakwood Beach residents felt their sacrifice betrayed by the actions of the state, which facilitated the sale and hand-off of land. This drama should be a lesson for future buyout programs – trust was important throughout the process, but respect is essential for long-term success. Exploring pathways for permanent land protection is, perhaps, a more thoughtful approach. At the very least, the state and the city should be on the same page about what the future of a place looks like.

In a place that firmly believes in the refrain, "nothing about us without us," appealing to residents' affective relationship to their island home might be the clearest route forward. As Duff puts it, "to experience a place is to be affected by place." To be sure, "[...] individuals typically remain uncertain, even unconscious, of the particular character of individual affects and their provenance. Yet one cannot help but feel moved by one's affects, in that one experiences affective responses even if one is not able to consciously describe or explain them."[11] In the case of absolute rejection of managed retreat, thinking through the lens of affect can help planners understand their resistance and adjust for the future – we are all pulled and pushed by our affects, even without realizing their motivations.

Under these conditions of affective response, laying out concrete, quantitative, analytical data to explain climate change's impacts on a place may not work. As Dan Mundy Jr. put it, "I do think local people will follow along if you give them an opportunity, and you don't get too deep into the weeds, you know, on charts and graphs with like, you know, little bubbles that no one could understand." He also cautioned against "extreme" predictions, explaining, "I'm going to talk real deal, this is what we're seeing right now, this is what you should plan on, and this is what you need to know even if you're making an investment." No matter how clear and straightforward the data may be, without appealing to the nature and affect of a place, movement may not budge. This is very clear in Broad Channel. Despite repeated warnings and incentives to move elsewhere, most residents stick around and have no intentions to move elsewhere.

"I mean in a sense, it was fear-mongering [that] made people want to turn off because they're like, 'no way.' So when you're suggesting something that's definitely more likely, something that feels a little bit more bite-sized that people can understand and see happening, rather than like this dramatic change that doesn't happen oftentimes [works better]." – Dan Mundy Jr.

Broad Channel could be described as a "thick" place, one which is "contrived in the imbrications of affect, habit, and practice."[12] The island's inhabitants are often multigenerational residents, being the children, grandchildren, and great-grandchildren of the original inhabitants of this manmade island. Families established themselves over time, bonds form between neighbors, houses stay within families, residents work together or are members of aligned industries – all forming a cohesive identity and sense of place.

Everyone has their routines on the island: how they engage with their natural surroundings, who they say hello to in the morning, and how they rethink their kids' journeys to school if the tide is too high on their street. With this deep sense of belonging and ownership of the world around them, relations to place may no longer be logically driven – planners practicing rationalism will likely be unsuccessful when

10. Shailer, Leslie. 2022. "'They Lied to All of Us': Ten Years After Hurricane Sandy,...." New York Focus, October 29, 2022.

11. Duff, Cameron. 2010. "On the Role of Affect and Practice in the Production of Place." Environment and Planning D: Society and Space 28 (5): 881-95.

12. Ibid.

we consider their futures. And as Baum correctly identified, “"[...] realistic planning depends on bringing to light and discussing community members' emotional and unconscious thinking, often unrealistic but always motivating, about what they want and get from relationships."[13] How does this manifest in Broad Channel? Is it a fear of being around others who don't look like them, share their lifestyle, or their ideologies? Is it that the island is the only place they've called home?

In a place like Broad Channel, which faces the impending, existential crisis of coastal flooding driven by sea level rise and who are frequently reminded of this fact by city, state, and federal officials, we face an impasse. Residents turn away from the conversation or don't engage to begin with. For some, it may not be a priority, and, for others, there may not be the time in the day to think more about the flooding they've learned to deal with since childhood.

This might be shaped by the “affective sensing of crisis” which puts a community like Broad Channel into a “temporal holding pattern in which the precariousness of not knowing what comes next ‘opens out into anxiety.'” The difficulty, however, is determining how pronounced feelings of anxiety might result in fear and inaction, and what might just be true despondency towards the issues at stake. Because sea level rise is such a gradual, nearly invisible change, residents on the island may never reach the point of sensing a crisis. But is there a latent anxiety, unconscious, driving resistance to action? And how does it operate relative to previous sensations of crisis?

‘Demarcation point': Hurricane Sandy

Every person I spoke to for this project brought up the devastating physical and psychological impacts of Hurricane Sandy. When my questions attempted to elicit current emotional responses to the built environment, talking about Superstorm Sandy was a prelude to any other part of the conversation. In a sense, Superstorm Sandy could be deemed a traumatic experience at the community level. Not only did the storm's violence impact individual homes and families, it also shredded the literal fabric of the neighborhoods. Nothing looked the same as it had the day before, touching nearly everyone on the island. To this day, more than 10 years later, islanders continue to relativize their emotional reaction to any current flooding to that of the superstorm. Nothing is as striking today as the damage done then.

Immediately after Sandy, on average, all of New York City saw an uptick in anxiety and mood disorder related emergency visits. The duration of power outages also had an impact on mental health response – the longer the outage, the greater the association to a negative mental health outcomes.[14] And while the city developed “Take Care New York” to address health equity, documentation for the program does not indicate or mentioned the impact of Sandy on mental health, or mental and physical responses to natural disaster.[15] Five years after the destruction, adult psychiatric hospitalizations were nearly double the city's average on the Rockaway peninsula, which also acts as Broad Channel's nearest health system.[16] Clearly, in the Rockaways, the emotional impacts of Sandy linger.

Dan Mundy Jr. explained that anxiety and stress heightened immediately post-inundation, and that he noticed a second peak during the efforts to rebuild. Reconstruction often felt messy, opaque, and fractured to many most impacted by the destruction of the hurricane. Now, in response to storms after Sandy, residents of Broad Channel often pay much closer attention to storms and share plans to hunker down elsewhere with their neighbors. The conversation is more open, and residents are more likely to take actions to evacuate the area.

Before Sandy, hurricane parties were common,

13. Baum, Howell. 2015. “Planning with Half a Mind: Why Planners Resist Emotion.” Planning Theory & Practice 16 (4): 498–516.

14. Lin, Shao, Yi Lu, John Justino, Guanghui Dong, and Ursula Lauper. 2016. “What Happened to Our Environment and Mental Health as a Result of Hurricane Sandy?” Disaster Medicine and Public Health Preparedness 10 (3): 314–19.

15. NYC Health. 2020. “Take Care New York: 2020.” January 11, 2020. NYC Health. 2023. “2019-2021 Community Health Assessment and Community Health Improvement Plan: Take Care New York 2024.” January 11, 2023.

16. Calma, Justine. 2017. “How New York City Is Tackling a Mental Health Crisis Spurred by Hurricane Sandy.” Grist. December 20, 2017.

but Dan explained to me that the emotional, visceral response to the threat of an incoming storm is stronger now after Sandy's destruction. He also observed that these raw reactions also fueled the support he needed to solicit from the city government. He felt that "the Sandy event, future climate level concerns [...] freaking out over it helped me get the support and agreement from everybody to go through" and move forward with resiliency strategies. The real challenge is in connecting the urgent response to one-off storms to the day-to-day changes in the environment and generating the same kind of buy-in from the community.

Love for place

The intergenerational nature of Broad Channel lends itself to long-term investment and emotional ties to the built and natural environment. And the uniqueness of the place, where residents are a short trip to New York City, but live on an island, with only a few thousand residents, and have access to the waterfront at their doorstep, is unmatched. The residents of Broad Channel know this – nothing else like it exists. Living on the island is treasured. When Margaret Wagner explained this to me, she said that it's the "sense of spirit, country, fellow patriotism, that has been here. I see it in the historical books since day one. And it continues to this day. You don't see that that much. People are disconnected. People don't know their neighbors. People are so busy. Life is so crazy. But in here, in Broad Channel, people will still stop and make a difference to their neighbor and help somebody."

A feeling of possessiveness comes across when residents describe the decades-long battle with the city just to remain on the island. Margaret told me about the history of the community coming to the city government united on issues, and why this is important: "And when you come to the politicians and you're unified like that, they realize, you know, they have to kind of get on board with us. Or be ready for

Figure 12. South end of the island, photo taken on a tour with a resident of the island. Photo by author.

the challenge from us. Because it's the way to get things done. And, you know, the city has invested a lot of money into this little area." This small neighborhood in the middle of the Bay has consistently won their right to stay in place, in the face of many serious efforts to move them elsewhere.

The insular nature of island-living increases the bonds between neighbors and strengthens their will to push against the city. As Dan Guarino put it, "it's that sense of belonging to this place. Not just, this is a neighborhood where I live, as opposed to this is the neighborhood where I *live*. This is *my* neighborhood. These are my neighbors and whether I know them or not, we're kind of all in this together. Broad Channel has a very strong sense of this."

Residents' connections to Broad Channel are likely the most difficult challenge for planners to address. There must be some acknowledgement of this in conversations with residents. It is not possible to recreate this exact community somewhere else, due to the impacts that the physical form of the place has had on its social histories and present cultural ecosystem. Planners cannot recreate this exact place somewhere else, but they can recognize its current and historical significance, acknowledge the hurt that changes to this space brings up, and understand what is important for residents' future homes and neighborhoods.

Meeting people where they are

With each new passing storm system, residents in Broad Channel and across Jamaica Bay are on newly heightened alert. Individuals like Roger Gendron, president of the Hamilton Beach Civic Association, run Facebook pages to track flood warning and document how flood data translates to people's doorsteps. Through moderating this page, he observed an increase in anxiety: "once you hear coastal flooding or tidal flooding, any kind of coastal flood product from National Weather Service, be it a statement, advisory watch or warning watch, the anxiety it causes. I see it on Facebook."

Gendron uses Facebook to encourage others in New Hamilton Beach to track flooding data for their own homes, so that they can internalize and understand what flooding looks and feels like. But he doesn't want to answer his neighbors' questions forever. By teaching them how to reconcile their experiences with flooding data, he aims to give others' the tools to advocate for themselves.

People living in Jamaica Bay, especially in coastal flood-prone areas, are much more likely than the average New Yorker to understand a tide chart or be aware of the stage of the current stage of the moon's cycle on any given day. This may not be surprising, considering residents' appreciation for and engagement with the natural world around them, whether by swimming, boating, fishing, or just observing. When I asked Dan Mundy Jr. about the tides, he launched into this detailed description: "You know, full moon tide. If the winds [are] out of the east, I could peg it. If I hear the trains blowing, because you don't hear the trains unless there's an east wind, and there's a full moon, then it'll flood. That's how in tune we are to what's going on."

Dan uses multiple resources to track the tides (importantly, because many of his neighbors rely on his direction for when to move their cars), including FloodNet and tide charts, but he and his Hamilton Beach neighbor, Roger Gendron, are most interested in teaching others how to understand the data about tidal flooding.

Dan wants his neighbors to go outside when there's a tide and take a mental note of what the tide charts said that day, so they can begin to understand how those data fit into their understanding of the world. Through Roger's Facebook page, Hamilton Beach/ Howard Beach High Tide Pictures, he shares all coastal advisory updates and offers explanations. Community members frequently post images of flooding outside of their homes, tagged with the time and date. Roger has also shared a method for tracking flood levels at individual addresses – arming Hamilton Beach residents with the weapon of knowledge. In both cases, Dan and Roger want to step down from the position of authority, enabling bottom-up grasp of knowledge and decreasing community members' reliance on a single trusted source.

But this knowledge may actually act as a double-edged sword for some. While residents are more aware, this can bring up frustration by the lack of engagement with the city government on flooding in their neighborhoods. And as Roger explained to me, "I think working with city planning is beneficial. But again, what happens is, you know, we worked so hard to get to the rezoning and this was in, I'm going to say 2017, 2018, something like that. But the same thing, just like every other city agency, the team we worked with is not there [anymore]." Staff overturn often slows progress and can create a disconnect between government work and the residents officials try to serve.

Given the complicated and contradictory nature of this issue (the gradual nature of climate change but importance of acting quickly), it might serve planners to follow the guidance of trusted community leaders and collaborate early on with them. Rather than bogging down in the global scale, start from the personal and move to the local. Begin with a clear-eyed, honest conversation with the team of planners – ask everyone to self-reflect and consider their positions on the issue.

Moving to the community, be curious about why residents live there and what their home means to them. How do they respond to change? What changes have community members liked? Who are you engaged with? What are their values? After establishing a trusted foundation, open the conversation up to community members' vision of the future. In Broad Channel, where many imagine future generations staying in place, it is important to understand why they want this future. Is it because of the proximity to water? Because of their neighbors? Feeling like the island operates as a small town? These are important considerations to establish when co-creating a future under different conditions due to climate change.

With these contexts in mind, approach the conversation about climate change's impacts realistically. Importantly, in Broad Channel, conversations should link the past increases in flooding with the future. Many residents have generational ties to the place, so understanding the difference between the flooding their parents or grandparents experienced, and their own experiences could refresh the conversation. When considering future scenarios, engagement should start with the most likely future projections, building to the less easily imaginable. These conversations should connect the past and future, grounding everyone in the reality of the present.

After giving residents an opportunity to sit with the information and speak with each other without government officials present, then future planning for the community and its members can begin. In each scenario, conversations should be had about perceived consequences, allowing time for officials to respond and clarify. Regardless, officials should be honest about the trade-offs at hand: community safety and threats to community cohesion, connections to place, and happiness. Threats to these qualities of place are not necessarily permanent – addressing them and revealing their temporary nature can be a useful part of the process. Community safety is out of their (and the city's) realistic control. Of course, significant investments could take place, but as it stands currently, none are designed to sustain the long-term impacts of climate change.

Understanding alternative uses for funding could strengthen the argument as well. How could significant investments in infrastructure that likely won't work in the long-term be better used? What are more sustainable alternatives for that funding?

Regardless of plans for Broad Channel's future, they should be rooted in what makes living there meaningful to residents now. Oriented in community-making, perhaps the more difficult conversations, like around managed retreat, can actually happen. And not only can it happen, but we are entering a stage of

An open letter

04

"Informed by such studies, planning faculty should teach their students to think psychologically about themselves, their colleagues, their clients, and their constituents."
- Howell Baum, "Planning with Half a Mind: Why Planners Resist Emotion" (2015)

To my fellow planners:
Consider the communities you work for that are resistant to planning for climate change – they exist, regardless of whether you've noticed them. If climate action efforts are slow to move or non-existent, there are likely some constituents you will need negotiate with to get on board to plan for a resilient future. Who might live there? What are their fears? Their dreams? What are their political alignments? What's at stake for them? What are the motivations of the loudest?

Now, turn inwards. What are your climate fears and anxieties? What are your dreams? Where do your political loyalties lie? And in what ways are they shared across your professional team? How do other priorities strain your ability to address climate, resiliency, and sustainability? How do your values, goals, and dreams align in your work? Have you had conversations about how your internal motivations impact your work with your colleagues? When was the last time that your team thought psychologically about your work in relation to the communities you work with?

Planning is deeply personal and political work; this meta perspective cannot be ignored as we move forward in planning. The psychological impacts of climate change on people vary widely. While some may think about its existential threat every day, others may be completely immune to concern, or even openly hostile to it being brought up in conversation.

I approached this project under the assumption that a resistant community's ire or lack of concern (especially in immediate threat of danger) could be, at least in part, due to an emotional dissonance or induced, protective distance from the realities of how climate change may already be affecting their home. In an echo chamber of other planners and conversations about climate change, resiliency, and sustainability, I assumed that the threat of climate change would be more broadly relevant to people's lives. In some ways, it was a relief to be proved wrong – the conversation need not come close to my personal anxieties about climate change at all.

When I attempted to get at my perceived emotional disconnect with Broad Channel community members during interviews, I often hit a dead end. Perhaps this disconnect doesn't exist, or it doesn't exist in Broad Channel. However, a significant emotional reaction was elicited when Sandy was brought up, which happened during every interview I conducted. The effects of Sandy have clearly had a lasting impact. Even if the direct connection was not completely clear, Sandy impacted the behaviors and attitudes of Broad Channel residents. This was the response that I expected when climate change was brought up. Sandy was a more obvious, sudden, shocking trigger. Unlike the gradual progression of climate change, it was easy for residents to see, feel, hear, and understand Sandy's threat to and impacts on their community.

While planners may be planning for resiliency, compromises take place to accommodate community resistance so that the resiliency planning can continue. But what can be done in places that don't have their own resiliency plan, let alone it be top of mind?

Before engagement with residents, the planning team should take stock of its own emotional connections to the issue. On Baum's recommendation, "planning faculty should teach their students to think psychologically about themselves, their colleagues, their clients, and their constituents."[1]

Once engagement and resiliency planning begin, start from a place of understanding. Again, Baum (2015) explains, "Planning successfully depends on understanding what motivates people: what desires and anxieties lead them to act as they normally do, and what would lead them to act in ways urged by a plan." And to engender a level of trust with your constituents, explaining one's own individual motivations is essential. With respect to climate change issues, begin with concrete, clear changes to the environment and explain in ways that are meaningful to the nuanced lives of the residents.

In Broad Channel, Superstorm Sandy is an emotional touchstone to this day. By referencing imagery related to Sandy, this can enable residents to better connect the emotional experience of that kind of flooding to the flooding of the current day. But more relevant to the day-to-day, communicating the changes to their environment in terms of tidal chart data may be a way to breakthrough.

It is also important, however, to hone in on the impacts of climate change currently, to clarify what the future could look like. It would not be helpful to use Sandy as a scare tactic. Residents won't take you seriously and might even think you're projecting your

1. Baum, Howell. 2015. "Planning with Half a Mind: Why Planners Resist Emotion." Planning Theory & Practice 16 (4): 498–516.

own fears onto their community, which doesn't need to be changed in their eyes. As the artist Clarinda Mac Low explained, "When it's urgent, it starts to read as your own personal urgency. People may not understand it as a kind of global urgency, because you're speaking human to human. If you're speaking to a human directly, they see your personal urgency, and may think that your emergency is not [their] problem."

This is why coming to terms with one's own emotional state in relation to the work becomes most important. Community members who might already be skeptical of government officials entering conversations might doubt the legitimacy of your claims if they sense an emotional nature to them. This puts planners in an impossible position – feeling connected with their own emotional state, but not betraying that state to the communities they work in.

This leads the discussion to the complex issue of community trust – honest conversations require transparency, but planners are trained to conceal their personal emotional stances. Too much, not enough; empathy, frankness. How can one square this circle? Relying on other planners on one's team is a start. Meeting people where they are at in their community is the best next step.

Regardless, our current political climate, one that is hostile towards climate action, merits movement outside of the state, at the hyper-localized level. So our thinking requires hyper-localization. In the words of urbanist Adam Greenfield: "In the retreat of the state, in the organized abandonment of vulnerable communities, in the perversely deliberate infliction of still-greater insecurity in a time already heavily freighted with it, we will find that there's nobody coming to help us—no system and no structure beyond those we are able to articulate for ourselves. If I express a belief that we'll surely rise to the challenge together, it's another way of saying that this will be because we won't have any other choice."

Appendix

Interview Protocol

Community leader

1. Please introduce yourself – share your name, the organization you work for, and your role there.
2. What role do you see yourself having in the broader Broad Channel/Edgemere community?
3. How long have you lived in Broad Channel/Edgemere? What do you like most about living there? What changes have you witnessed over time?
   a. [if they've lived there for a long time] Can you share a favorite memory about Broad Channel / Edgemere with me?
4. What do you know about increased flooding in your community? Erosion over time?
   a. [if they share something] How did you become aware of increased flooding and land loss?
   b. How does flooding affect how you experience and get around your neighborhood?
5. When was the last time you thought about the environmental changes happening to Broad Channel/Edgemere?
   a. What prompted these thoughts? Did you share them with others?
   b. If so, how did they respond to your reflections?
   c. [if they don't] Have you considered looking into the impacts of climate change on your community?
6. Have you attended a community meeting or town hall before?
   a. [if yes] When officials and city planners talk about ideas for the future of your neighborhood, do people at the meeting discuss climate change?
   b. How do these conversations go? Who participates? How do they conclude?
7. In an ideal world, how could government officials communicate the potential climate change risks to your community?
8. What do you think the future of Broad Channel/Edgemere looks like?
9. What makes you feel hopeful?
10. Is there anything else you would like to share that we didn't get to in this conversation? Are there any other people you think I should talk to?

Planner/Professional

1. Please introduce yourself – share your name, the organization you work for, and your role there.
2. Tell me about the last time climate change came up in the context of a public engagement or community meeting.
   a. What was the context?
   b. What was said?
   c. How did the public respond?
3. What kinds of challenges do you face in communicating clear and realistic expectations for the future of communities?
4. Do you find that communities are talking about sea level rise?
   a. [if yes] what does that conversation look like?
   b. [if no] How do you communicate changes to a community due to sea level rise?
5. How do you contend with emotions that come up when meeting with the public?
   a. What prompts these kinds of conversations?
   b. Where do they take place?
   c. What would your ideal engagement with the public over climate change look like?
6. Is there anything else you would like to share that we didn't get to in this conversation? Are there any other people you think I should talk to?

Artist

1. Please introduce yourself – share your name, the organization you work for, and your role there, your artistic practice.
   a. Please share a bit about how climate figures into your artistic practice.
2. How do you typically engage with the community through your artistic practice?
   a. Where do you work? Who do you interact with?
3. Do you find that communities are talking about sea level rise?
   a. [if yes] what does that conversation look like?
   b. [if no] How do you communicate changes to a community due to sea level rise?
4. What do you think an ideal engagement about climate change with the public looks like?
5. Is there anything else you would like to share that we didn't get to in this conversation? Are there any other people you think I should talk to?

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