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Two years ago, Rockaway was inundated by Super Storm SANDY, which vividly demonstrated the need to develop strategies to adapt to the inevitability of climate change. Pratt Institute, building on its tradition of participatory planning and advocacy of equitable development partnered with the Center for Social Inclusion to develop an initiative referred to as RAMP – Recovery, Adaption, Mitigation and Planning. The purpose of RAMP was to make available to low and moderate income communities and communities of color the technical resources so that they could participate e ectively in the recovery and rebuilding of their communities. RAMP is predicated on the belief that strong and well-organized communities are the foundation upon which resilient and equitable places and neighborhoods emerge. RAMP recognizes that storms do not discriminate but that often public policies and programs in response to disruptive events often do particularly when resources or scarce and people directly a ected are not fully engaged. With the support of the Kresge Foundation and the commitment of students and faculty from Pratt Institute's Programs for Sustainable Planning and Development [PSPD] a Series of community planning studies, seminars and workshops were initiated of which the Rockaway studio is one.

The studio was charged with addressing both the social and economic justice needs of the community, along with its complex physical and environmental constraints. Based on the relationship established by RAMP with the Rockaway Waterfront Alliance the studio undertook an analysis of the peninsular in terms of its demographic and physical make-up, identifying strengths, weaknesses, opportunities and threats to the community. The final report presents policy, design, planning and implementation strategies that will support a more sustainable community. Proposals address both the imminent threat of climate change to a coastal community, as well as structural issues around the need for better transit, education, economic opportunity and other aspects of environmental justice for the community. Proposals vary from low-tech low-cost interventions such as designated bike paths under the elevated A-train, to more far-reaching proposals such as a new Jamaica Bay Science and Resiliency Center.

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EXECUTIVE SUMMARY

In October 2012 the Rockaway Peninsula was inundated by Hurricane Sandy, a disaster that exposed the fault lines of race and class that run through the peninsula. In response, the Rockaway Waterfront Alliance partnered with Pratt Institute's Programs for Sustainable Development and Planning to engage in a planning study of the peninsula, focused on the communities of Arverne and Edgemere, and create a plan for the future of the area. This studio report not only summarizes the conditions faced by residents today, but also lays out concrete recommendations for how to move to a more resilient Rockaway in which all residents have decent, a ordable housing, economic opportunity, and the ability to safely and rapidly move in and o the peninsula. Our recommendations are grouped functionally in this report, with separate sections on housing, economic development, and transportation. These recommendations range from the very local, such as interventions surrounding Firehouse 59, to recommendations concerning the entire peninsula.

The danger from climate change and associated

sea level rise should not be underestimated. While we have planned against a 2.3-foot sea level rise based on EPA projects, recent research projects sea levels to rise 3.2 feet by 2100. In light of such danger, the recommendations presented herein should be considered the minimum that the society can do to prepare this community for the threats of the future.



TRANSPORTATION

Moving across the peninsula and from the peninsula to the mainland is challenging without a private vehicle. For transportation, our key recommendations are as follows:

Expand ferry service for Jamaica Bay.

Introduce Select Bus Service for Rockaway peninsula.

Institute a limited stop Q22 bus service that would significantly reduce cross-peninsula travel time.

Re-introduce a full-service H train (a crosspeninsula shuttle train) from Beach 116th to Mott Avenue along the Rockaway peninsula.

Overhaul the Jamaica Bay Greenway and biking infrastructure along Rockaway Peninsula.

Study the feasibility of a local and independent bike share system. A bike-share system would significantly enhance mobility for locals and tourists alike, enhancing the seasonal economy and making intermodal transit more feasible. Convert the space under the elevated A-train into a bike path, enhancing mobility for those without vehicles.

Study the feasibility of adding an ADA accessible subway stop at Beach 80th street.



HOUSING

The housing stock of the area is vulnerable to storm surge as well as to gentrification-induced displacement. For housing, our key recommendations are as follows:

> Implement deeper a fordability for Arverne East. Rather than 57 percent market rate / 43 percent a fordable at 130 percent Area Median Income, we recommend 50 percent market rate, 30 percent moderate income, 20 percent low income.

Rather than using Area Median Income (\$83,875) to determine a fordability for housing developments, use the Community District household median income as a Locally Adjusted Area Median Income (\$47,218) to determine a fordability of developments. Work with NYCHA residents to assess the potential for redeveloping NYCHA parking lots into elevated, ramp-accessible senior housing with parking below. At present, NYCHA struggles with ine f cient occupancy² and seniors living in the upper foors of elevator buildings.³

Dedicate City-owned vacant lots to workforce housing and storm-water management with reinforcement of the bayside coastline.

Implement a Coastal Resilience Special District to require resilient housing design.



ECONOMIC DEVELOPMENT

The study area su ers from high unemployment and from a lack of opportunity for youth. For economic development, our key recommendations are as follows:

> Remediate and revitalize vacant industrial sites for the creation of a "Creative Commons," and attract existing businesses to anchor and help support this endeavor.

Develop a green jobs training center and light manufacturing business incubator.

Create partnerships amongst various stakeholders (public, private, and local community groups) in order to provide interventions and job training for youth.

Install a bike repair store near the A-train station; use vacant lands for a community garden; and design a small-scale local food-production incubator.

Design an outdoor cafe and food truck area using vacant space adjacent to the A-train overpass.



EDUCATION

The area has a large, unengaged youth population for whom gangs seem like the only alternative. For education, our key recommendations include the following:

> Foster a stronger partnership between National Parks and Rockaway Public Schools in order to expose students to various National Park programs and research projects, which take place in and around the Jamaica Bay unit of Gateway National Recreation Area.

Redevelop the National Grid site to serve as a strategic location for the Jamaica Bay Science & Resiliency Institute, which would include structured parking for the ferry. This project assumes a private-public partnership.

Create educational programs that are centered on sustainability and resiliency in partnership with local NYC organizations and City agencies.

Incentivize the creation of career readiness programs that train both youth and young adults, such as energy e f ciency and technology training.



STORMWATER MANAGEMENT

With storm surge a major danger, the area needs to be able to deal with stormwater e ectively. Our key stormwater management recommendations are as follows:

> Partner with community groups and city agencies such as NYC DOE, NYC DPR, NYC DOT, Trust for Public Land, NYC DEP, and other elected o f cials to develop programs for the construction and maintenance of green infrastructure.

Explore the opportunity of vacant lots south of Beach Channel Drive between Beach 84th and Beach 75th for active recreation with green infrastructure.



PLACEMAKING

Areas surrounding transit hubs in the study area tend to be rather desolate in appearance, with unpaved parcels serving as informal parking lots. In response, we propose the following placemaking recommendations:

Design of a gathering place full of active programming for Firehouse 59.

Design a skateboard park and playground under the A-train overpass.

Transform hot spot locations (i.e.: Crossbay Bridge Promenade; Firehouse 59; Jamaica Bay Wildlife Refuge; Bayswater Park; Proposed H Train stop at Beach Channel/Beach 81st; Proposed Beach 108th Street Ferry landing) into both emergency and information hubs.

Design and curate an exhibition that commemorates Hurricane Sandy, as well as previous storms to both inform and educate the public of the past, present and future of the Rockaways.

Design and implement night-lights throughout the study area, as well as wayfinding and signage.



GOVERNANCE

To accomplish all these goals, we recommend that the City of New York appoint a coordinator with the power to implement recovery e orts for South Queens for all issues related to housing, transportation, parks, economic development, and utilities. The czar would lead a task force that would have the authority to direct city agencies to take action to improve the resilience of the study area.

Introduction

Mission and Planning Process

This plan is a collaboration between Pratt Institute's Programs for Sustainable Development and Planning (PSPD) and the Rockaway Waterfront Alliance, a 501(c) (3) organization based in the Rockaways. The members of a spring 2014 City and Regional Planning studio class, led by Professors Ron Shi man, David Burney, Michaela Birmingham, and Quillian Riano, carried out the work itself. The mission of the studio was to plan for a more resilient Rockaway Peninsula in which the focus was addressing issues of di erential vulnerability across the peninsula given the racial and economic divides present in the community. Students first conducted existing conditions research using local and national data in conjunction with site visits. Based on feedback from Rockaway Waterfront Alliance, students then developed recommendations to address the weaknesses and threats identified in the research phase.

At the end of spring 2014, students presented to the Rockaway Waterfront Alliance and area high school students a f liated with the group, to the community at Rockaway Earth Day 2014, and to the faculty of Pratt Institute's Programs for Sustainable Development and Planning. Below are listed the strengths, weaknesses, opportunities, and threats identified in the existing conditions research, the goal of the study, the objectives developed to meet that goal, and the work planned for the first phase of implementation.

SWOT Analysis

City planners, when analyzing an area, will often conclude an analysis with a discussion of the place's Strengths, Weaknesses, Opportunities, and Threats, or SWOT for short. A SWOT analysis helps planners identify key assets and potential issues, as well as opportunities that should be pursued. For the Rockaways, for example, an obvious threat is damage from future severe weather events, and an obvious strength is the quality of the natural assets in the area, such as beaches.



Natural Assets (i.e. Open Space; Waterfront Access; Beach)

Historical and current beach culture

Diversity

Large stock of public housing

Active and engaged community (Community Based Organizations; Faith Based Organizations; Tenant, Civic, Homeowners)

Strong voluntarism



An informal environmental justice community that misses out key opportunities around environmental justice issues • Historical and current beach culture

The Rockaway's have 1 of the highest obesity rate according to a community survey administered by NYC Department of Health and Mental Hygeine

Lack of social support and infrastructure

Isolation (i.e. degraded transportation infrastructure; lack of connectivity in and around the Rockaways and to the rest of NYC

Opportunities



Strengthen and improve unity in a diverse environment

Growing partnerships (i.e.: National Park Service with NYC Parks & Rec.; other coalitions)

Educational / Job / Training opportunities (i.e.: Jamaica Bay Science & Resiliency Institute)

Vacant Land (Reuse of underutilized NYCHA parking lots and other vacant parking lots)

Firehouse — hub for programming/education/etc.

Underdeveloped space

Extending and improving greenways

Large Park spaces that need programming and interventions (i.e.: Rockaway Community Park/Edgemere Landfill is 200 acres)

Research/experimentation that is done in Jamaica Bay (i.e.: dune planting; oyster restoration)

Climate change/rising sea levels
Displacement due to gentrification and climate change
Overall disunity
Income Disparities
Government agency Hurricane Sandy fatigue
Crime/gang activity concentrated in and around public housing
Overall Safety

Threats

GOAL

Creating an equitable and resilient Rockaway in the face of Climate Change.



1 Preserve and protect existing communities



4 Strengthen resiliency



2 Improve connectivity for Rockaway residents



5 Create sustainable economic development



3 Create unity within the Rockaway peninsula



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6 Empower communities with information to improve capacity, self-sufficiency and obtain public services

Next Steps

During summer of 2014, PSPD graduates students, under the leadership of Professor Ron Shiman, will work with Rockaway Waterfront Alliance, Ocean Bay Community Development Corporation, and the City of New York to refine, amend, and expand he recommendations include in this report and to begin the Implementation process.



EXISTING CONDITIONS

New York City is a city that is recognized not only regionally, but also nationally and internationally; however when many think of New York City they tend to think of Manhattan and forget the four outer boroughs. The Rockaways or the Rockaway peninsula (referred to as "Rockaway" by locals), our report's focus area, comprises a series of neighborhoods in southeastern Queens. The peninsula is located in between two bodies of water, Jamaica Bay and the Atlantic Ocean, and also shares a border with Nassau County's Five Towns area (see Map 1, inset). The Rockaway peninsula also forms a part of the Long Island island chain often referred to as the "outer barrier" that separates the bays (Jamaica Bay, Brosewere Bay, Hewlett Bay, Middle Bay, Merrick Bay, Baldwin Bay, Bannister Bay, East Bay, Merrick Bay, South Oyster Bay and the Great South Bay) south of Long Island from the Atlantic Ocean.

The Rockaways encompass approximately seven square miles, stretching roughly 11 miles in length with an average width of less than three-quarters of a mile. In the historical portion of this chapter we will highlight the history of how these low-lying areas that were originally delineated as recreational and resort areas transformed into fully developed residential communities, which are susceptible to storm surge, wave erosion, and inundation.





Figure 1: Regional map of New York City with the Rockaways highlighted

History and Political Structure

History of Study Area

The first non-native settlers arrived on Rockaway in 1690, but it was not until the widespread construction of railways, homes, and churches during the 19th century that Rockaway began to take the shape it holds today. The Cholera Epidemic of 1832 sent a large influx of New Yorkers fleeing the inner city to its rural outskirts, the Rockaways included. Rapid development ensued, and the need for improvements to public facilities quickly became apparent. By 1875 entrepreneurial developers, such as William Wainwright, had transformed Rockaway into a desirable beach resort. The Rockaways, and other parts of Queens County, were consolidated into New York City in 1898. Development of Rockaway as a beach resort continued until shortly after World War II, when advances in transportation made the more distant waterfront destinations of Long Island and New Jersey more attractive to vacationing New Yorkers.

Falling out of favor in the post-war era, Rockaway slid into economic decline, culminating with widespread demolition associated with the federal urban renewal programs of the 1950s and 60s. Robert Moses. mid-20th century master builder of New York City who practiced top-down development of infrastructure and parks through all five boroughs, Westchester County, and Long Island, made a major impact on the Rockaways. At the peak of his power, Robert Moses saw Rockaway as "both a symbol of the past and a justification for his own aggressive approach to urban renewal."⁴ With low land prices and the power of eminent domain, Moses' "Rockaway Improvement Plan" guickly made the peninsula home to over half of the public housing units in the Borough of Queens, despite having only a fraction of its total population.⁵

In the years since, Rockaway has reemerged as a community of single-family homes, a ordable high-rise apartment buildings, and slowly gentrifying mixed-income communities.



Summer Bungalows on Beach 40th built between 1912–1919 © "Old Rockaway, New York, in Early Photographs" by Vincent Seyfried and William Asadorian



Located on the east side of B. 32nd Street at Spray Vlew Avenue, The Hotel Lorraine was built in 1908. The hotel served middle class clientele and the photo above and below were taken in 1935. (Robert Stonehill) © "Old Rockaway, New York, in Early Photographs" by Vincent Seyfried and William Asadorian



Vacation bungalow colony at Rockaway, Queens, Early 1900s





The Ostend Hotel and Casino was built on part of the old Carrey estate at the foot of B. 14th Street, beginning in 1908. By the 1920s, with 2,000 wooden bath houses it was the largest bathing pavilion in Far Rockaway. The Ostend was destroyed by fire on April 8, 1941. (Postcard from the Vincent F. Seyfried Collection) © "Old Rockaway, New York, in Early Photographs" by Vincent Seyfried and William Asadorian

EXISTING CONDITIONS | The Rockaways compared with Arverne and Edgemere

Figure 3:

The Rockaways: Historic Districts & Landmarks



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