

***RISING CURRENTS: PROJECTS FOR NEW YORK'S WATERFRONT* PROPOSES
INFRASTRUCTURE SOLUTIONS FOR THE EFFECTS OF CLIMATE CHANGE**

MoMA Exhibition Showcases Sustainable Proposals by Teams of NYC Architects

Rising Currents: Projects for New York's Waterfront

March 24–October 11, 2010

The Robert Menschel Architecture and Design Gallery, third floor

NEW YORK, March 4, 2010—*Rising Currents: Projects for New York's Waterfront*, a major initiative organized by The Museum of Modern Art and P.S.1 Contemporary Art Center to propose solutions for the effects of climate change on New York's waterfronts, culminates in an exhibition at The Museum of Modern Art from March 24 through October 11, 2010. The exhibition presents architectural proposals that emphasize adaptive "soft" infrastructure solutions for New York and New Jersey's Upper Bay to make New York City and surrounding areas more resilient in responding to rising sea levels and more frequent storm surges. Elements of the proposals range from the creation of salt- and freshwater wetlands along the banks of the bay and a Venice-like aqueous landscape, to habitable piers and manmade islands, and a protective reef of living oysters. Five multidisciplinary teams of New York-based architects, engineers, and landscape designers selected to participate in *Rising Currents* developed the proposals during the initiative's workshop phase at P.S.1 Contemporary Art Center, from November 2009 to January 2010.

Rising Currents: Projects for New York's Waterfront is organized by Barry Bergdoll, The Philip Johnson Chief Curator of Architecture and Design at MoMA. Guy Nordenson, professor of structural engineering and architecture at Princeton University and a faculty associate of the Princeton University Center for Human Values, served as a consultant. Klaus Biesenbach, Director, and Antoine Guerrero, Director of Operations and Exhibitions, at P.S.1 Contemporary Art Center, were instrumental in the organization of the workshop phase of *Rising Currents*, which was part of the P.S.1 initiative *Free Space*, an ongoing program in which artists and non-profit arts organizations are invited to use available gallery space for rehearsals, workshops, research, and events in exchange for an exhibition or live presentation for P.S.1 visitors.

"The innovative proposals developed during the intensive workshop at P.S.1 extend beyond even my most optimistic expectations," said Mr. Bergdoll. "Not only has *Rising Currents* created a set of visions for a different kind of harbor city, but it also is illustrative of a new role for P.S.1 and MoMA in stimulating and harnessing debate about vital issues of public concern in architecture and urban planning. Climate change is seen here not simply as a problem to be confronted, but an opportunity to be seized. As the city charts its future in coming decades with the realities of changed sea levels and more frequent storm surges, the proposed projects featured in this exhibition represent realistic possibilities whose impact and influence could be felt

in the not-so-distant future. The projects are truly 'glocal,' that is, conceived for local conditions, but with global implications."

The five teams of architects, engineers, and landscape designers—led by principals at Architecture Research Office (ARO) with dlandstudio, LTL Architects, Matthew Baird Architects, nARCHITECTS, and SCAPE/LANDSCAPE ARCHITECTURE PLLC—have conceived projects for five sites, identified and researched by the Latrobe Team (a multi-disciplinary Princeton University affiliated group funded by the Fellows of the American Institute of Architects and led by structural engineer Professor Guy Nordenson, and including his associates Catherine Seavitt and Adam Yarinsky). The Latrobe Team's study, and the related publication, *On the Water: Palisade Bay*, served as the framework for the teams' work toward adaptive and widely applicable infrastructure for the sites, which is on view in this exhibition.

To provide the context for understanding the problems and issues that the teams were required to address during the workshop phase of *Rising Currents*, the exhibition begins with a background presentation of the Latrobe Team's project, including its final master plan and schematic proposals, a detailed presentation of topographic and bathymetric data, as well as projected flooding based on incremental sea level rise. Nordenson, Seavitt, and Yarinsky's work is the basis for the various proposals for the coastline of New York and New Jersey, not only to render it both more resilient for climatic changes to come, but also to reorient the perception and the experience of the city around the water, allowing New York to join a host of cities around the world from Copenhagen and Amsterdam to Singapore and Hong Kong, which increasingly focus on an active waterfront of mixed use.

At the center of the exhibition are the physical and digital models and drawings produced by the five teams, whose members worked collaboratively to create the exhibition with members of MoMA's Department of Exhibition Design and Production.

Rising Currents inaugurates a new series of Architecture and Design exhibitions at MoMA called *Issues in Contemporary Architecture*, which will focus on timely topics in contemporary architecture with an emphasis on the urban dimension in order to increase public dialogue around seminal issues.

Zone 0: A New Urban Ground
Adam Yarinsky and Stephen Cassell of Architecture Research Office (ARO) with
Susannah Drake of dlandstudio
Lower Manhattan

Beginning in the 1600s, Dutch colonists, followed soon by the English, created docks to facilitate trade, fortifications to prevent attack, and sea walls to protect the growing city from its lifeline. While these structures gradually erased the island's marshy edges, the city's modern sea wall cannot withstand future sea levels and storm surges.

ARO and dlandstudio partnered to propose a vision for Lower Manhattan—combining soft and hard infrastructure solutions—nothing less than a new paradigm for city infrastructure. In their plan, downtown is "greened" with the introduction of salt- and freshwater wetlands, additional

parklands, and streets reconceived as a kind of natural space. The history of urban modernization can be traced through streets, which perform key urban functions beyond surface transportation such as the circulation and disposal of wastewater. While earlier periods imagined the street as a constructed machine at odds with nature, in ARO and dlandstudio's proposal, lower Manhattan would be paved with a mesh of cast concrete and engineered soil- and salt-tolerant plants. This would not only result in greenways but an invisible city underbelly that acts as an absorptive sponge for rainwater. This new engineered organic system would be poised to react to daily tidal flows and occasional storm surges. New wetlands would act as an additional buffer against tides and return the natural dynamics of the island to view for the first time in centuries.

Zone 1: Water Proving Ground

Team Leaders: Paul Lewis, Marc Tsurumaki and David J. Lewis, LTL Architects

Liberty State Park

The zone including Liberty State Park, the Statue of Liberty and Ellis Island is destined to all but disappear with rising sea levels. The team led by LTL architects envisioned a future for this area, largely created by massive landfill operations associated with the arrival of the railroad into the working port between 1860 and 1928. Faced with the challenge of a landscape defined by water, LTL imagined what would be required to occupy lands that are subject to the continual dynamics of the water, and change the profiles of a complex and serrated shoreline. Unlike more traditional defensive approaches like high sea walls that seek to sharpen and define the water's edge, the LTL led team aimed to increase the coastline by a factor of ten, to 45 miles, creating a wholly new landscape with a variety of possibilities for future urban life.

The underlying structure of the new site, with its acceptance of an ambiguity between sea and land, is a series of four raised "fingers" created by sculpting the existing landfill to create a series of "petri dishes" for both protected and productive areas. The new landscape that emerges is carefully reconnected to the New Jersey mainland to create park and productive areas that are a part of the region, as opposed to the current Liberty State Park, which is cut off by highway barriers and difficult to access.

LTL proposes a variety of uses for this hybrid land/seascape—from farming on land and in water (aquaculture), to recreation, to ecological research—which is interconnected by a system of land and water transportation. LTL offers a new kind of aqueous landscape more reminiscent of Venice than New York, for an area that could be swallowed up by the sea in coming decades. In 2100 this part of the New Jersey coastline (which includes Jersey City), could be exemplary of an approach to coastal occupation pertinent for millions of the world's citizens in the not-so-distant future.

Zone 2: Working Waterline

Team Leader: Matthew Baird, Matthew Baird Architects

Kill Van Kull and Bayonne

Matthew Baird and his team tackled a site with features ranging from the low lying lands of Bayonne—occupied primarily by an oil tank farm and military pier—to the residential areas of Staten Island along the Kill van Kull, largely on higher land. Their vision is at once global and local, for they realize that in response to climate change, shipping routes are opening in the Arctic that will potentially reshape the economy of the New York Harbor as much as higher sea levels will reshape the contours of the land. Their imaginative proposal is a new natural and new economic ecology for the city and region.

Baird and his team “curate” the landscape and its uses, creating a vast sinewy land berm to protect certain areas and provide an elevated path through the site for pedestrians and vehicles. At the same time, they have re-imagined the existing World War II-era piers and warehouses as a recycling facility. They imagine new uses for what, in the future, will be disused Bayonne oil tanks—creating biofuel fed by wastewater and using the facility to recycle the region’s vast supply of discarded glass to create jacks that can be dumped onto the sea bed to create a new type of reef. This reef will serve as breakwaters and, over time, create new inhabitants for marsh grasses and marine life.

The project creates a new productive landscape on the site of a potential ecological disaster. If nothing were to be done here, the oil tank farm and its contaminants would be partially submerged by the end of the century. Baird sees no contradiction in our emerging world between new types of industry and parks. Currently, the former Fresh Kills landfill on Staten Island is being developed into a major park. So too, in a region to the north, exists the potential for new energy production, industrial recycling of glass, and atop it all what the team calls a great “solar” highway for promenades. All of this is combined with opportunities for water sports—from kayaking among industrial artifacts of the twentieth century to swimming over the glass reefs of Bayonne.

Zone 3: New Aqueous City

Team Leaders: Eric Bunge and Mimi Hoang, nARCHITECTS
Sunset Park, Bay Ridge, and Staten Island

The team led by nArchitects envisions a future for the largest and most varied of all the five zones examined in *Rising Currents*, comprising the heights on both sides of the Verrazano Narrows Bridge (in Bay Ridge, Brooklyn and Fort Worth, Staten Island) and a low-lying area of Sunset Park, Brooklyn to the north. “New Aqueous City” offers a new paradigm for a city that can control and absorb rising sea levels even as it accommodates an expected spike in population growth over the next century.

In counterpoint to an earlier generation’s infrastructure embodied by the Verrazano Bridge, this project blurs the boundaries between land and sea, extending the city into the water. Habitable piers (with a new type of housing suspended above them) provide docking points for a new network of ferries connecting the region across the harbor. An archipelago of manmade islands connected by inflatable storm barriers encourages silt accumulation, fostering natural resilience against storm surges and reinforcing existing storm barriers south of the Narrows. At the same time, the water is extended into the city—particularly Sunset Park—which is punctuated by a network of infiltration basins, swales and culverts to absorb storm runoff, or function as a parks when dry.

Underlying a host of planning and design suggestions is the assumption of a selective role for government investment in transformative infrastructure. Bio-gas-powered ferry services and a new tramway supplement existing rapid transit. nArchitects proposes thus a dynamic infrastructure that works with nature rather than against it.

Zone 4: Oyster-Tecture

Team Leader: Kate Orff, SCAPE / LANDSCAPE ARCHITECTURE PLLC
Gowanus Canal, Red Hook, and Buttermilk Channel

The team led by landscape architect Kate Orff and SCAPE took on one of the most controversial zones of New York City, which encompasses the highly polluted Gowanus Canal (subject of numerous studies on decontamination and redevelopment), Governor’s Island, and the waters in

between. As the project was being completed, the Gowanus Canal was designated a Superfund site by the Environmental Protection Agency.

Engaging issues of water quality, rising tides, and community-based development, this team proposes to nurture the already active revitalization of a long lost natural oyster reef. They have proposed developing an armature in the shallow waters of the Bay Ridge Flats just south of Red Hook, Brooklyn, for growing native oysters and stimulating other marine life. The living reef is constructed from a field of piles and a web of “fuzzy rope” that supports oyster growth. Harnessing the biotic processes of oysters, mussels and eelgrass, the reef cleans millions of gallons of harbor water, and by attenuating waves—both on an everyday basis and in the case of a storm surge—protects the adjacent shore line.

The team has reimagined the Gowanus Canal as a giant oyster nursery, where oysters could begin their natural work of reef creation (hence the title, *Oyster-tecture*). The hatchery will, in turn, seed the reef in Bay Ridge Flats. On the shore, a new, cleaner water-based community with Combined Sewer Overflow CSO gardens and local industry is planned where one day residents might savor homegrown oysters.

SPONSORSHIP:

The exhibition is made possible by The Rockefeller Foundation and is the first of five exhibitions in the series *Issues in Contemporary Architecture* supported by Andre Singer.

PUBLICATION:

Rising Currents: Projects for New York's Waterfront is accompanied by the publication *On the Water: Palisade Bay* by Guy Nordenson, Catherine Seavitt, and Adam Yarinsky, with an afterword by Barry Bergdoll. *On the Water: Palisade Bay* is the collaborative initiative of a group of engineers, architects, landscape architects, planners, and students to imagine a “soft infrastructure” for the New York/New Jersey Upper Bay area by developing interconnected infrastructures and landscapes that rethink the thresholds of water, land, and city. Research from this project is the inspiration for MoMA's exhibition *Rising Currents: Projects for New York's Waterfront*. The book is co-published by The Museum of Modern Art and Hatje Cantz, in collaboration with the Princeton University School of Architecture and the Princeton University Center for Architecture, Urbanism and Infrastructure. It is available through MoMA stores and online at www.momastore.org. It is distributed to the trade in the United States and Canada by Distributed Art Publishers (D.A.P.) and outside North America by Hatje Cantz. Hardcover: 302 pages; 350 color illustrations. \$50.

EXHIBITION WEBSITE:

A web site, www.moma.org/risingcurrents, accompanies the exhibition. It includes posts by team members and by Barry Bergdoll, and invites visitors to join an online conversation between curators, designers, invited experts, and others, about the future shape of the city.

PUBLIC PROGRAMS:

Public programs will be offered in partnership with several external organizations at the Museum and other locations while the exhibition is on view. Upcoming events will be listed on moma.org and on the exhibition website at www.moma.org/risingcurrents.

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For downloadable high-resolution images, register at www.moma.org/press.

Public Information:

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Hours: Wednesday through Monday: 10:30 a.m.-5:30 p.m. Friday: 10:30 a.m.-8:00 p.m.
Closed Tuesday

Museum Admission: \$20 adults; \$16 seniors, 65 years and over with I.D.; \$12 full-time students with current I.D. Free, members and children 16 and under. (Includes admittance to Museum galleries and film programs). Target Free Friday Nights 4:00-8:00 p.m.

Film Admission: \$10 adults; \$8 seniors, 65 years and over with I.D. \$6 full-time students with current I.D. (For admittance to film programs only)

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