

What will we do when waters rise?

July 03 2013 | [COASTAL DEVELOPMENT](#), [BEACH FILL](#), [COASTAL ARMORING](#), [COMMUNICATIONS](#), [CULTURE SHIFTING](#).

Check out this video simulation by Stephen Yablon, an architect from NYC.

It literally made me lean back in my seat. Wild concepts here... otherworldly one might say.

I wanted to know more of the backstory.

Check out the video first, an in-depth interview with Stephen follows.



Jim: Stephen, this video is stunning. I both love it and am I'm troubled by it... I suppose both those emotions are valid as the idea of us changing the way we live as a response to coastal changes is becoming a charged issue. What is this video? Why did you make it and what is your overarching idea?

Stephen: It was created by my NYC based architecture firm (Stephen Yablon Architect) and was selected as one of the winning submissions to an international competition for innovative ideas for post-Sandy Rockaways, a barrier peninsula located near the entrance to New York City's harbor. The competition was sponsored by MOMA PS1 (an art institution in an old public school in Queens, NY), an affiliate of MOMA (the Museum of Modern Art).

The Rockaways were severely devastated by Sandy. It lies just a few feet above sea level, is relatively flat, and densely settled with a range of housing types including small bungalows, larger houses, and public housing towers, all built without much consideration for storm surges. There was a boardwalk and not much in way of protective dunes between the ocean and the street grid. The north side of the strip faces Jamaica Bay, a large estuary open on one end to the Atlantic Ocean. The Rockaways has one of the best known surf breaks in the New York City area and is accessible from Manhattan by subway.

Our idea was a new form of barrier island settlement; entire beach neighborhoods high above the 100 year flood plain, so that the barrier island can naturally change with minimal impact to human habitation. The idea was inspired by visionary raised cities proposed by architects in Europe and Japan in the 60's. It's essentially similar to an offshore oil platform, supported by open steel truss columns housing stairs and elevators (which could be raised up in the event of a severe storm). Houses and commercial buildings would be modular prefabricated structures which could be lifted and installed on the platform by cranes. People get around on the platform by walking or cycling on wooden walkways. Wood decked public spaces surround large openings in the platform which along with the open steel structure of the platform allow light to filter below. This was important because the success of the scheme really depends on it being very pleasant at the beach level.

When you look at the history of barrier islands and what happened to them during Sandy and earlier storms, it's evident that they are dynamic environments, always changing, eroding, and moving further inland after major storms. This tendency will only become more dramatic in the future given rising sea levels and more frequent storms and surges. Typical responses have often included expensive defensive and post storm repair and rehabilitation measures

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deployed at taxpayer expense even though these areas are high risk environments. The effects of these actions are often unpredictable and sometimes cause erosion on adjacent beaches and, as Surfrider well knows, negatively affect existing surf breaks.

Much of the post-Sandy devastation included damaged infrastructure (boardwalks, roads, public buildings), debris and toxic waste from wrecked homes, as well as flooded and abandoned cars whose gas and oil had leaked everywhere. It was important that our new model prevent this type of damage in the future by minimizing any type of structures, roads, etc at ground level. Cars are prohibited and ground transportation would be via electric golf carts, bicycles, and emergency vehicles. Cars would be stored in raised parking decks on the bay side causeway entrances which would have monorail connections to the raised neighborhoods.

Emergency evacuation was an important consideration in the design. If evacuation is required, everyone would bring their beach related stuff (bicycles, surfboards, umbrellas, etc) up inside their houses either via the elevators or smaller public hoists scattered throughout. They would then take a small vehicle or monorail to the parking decks and drive inland.

Jim: Ok, great. Tell us what your personal story is. In other words, why do you care about this subject? What led you to invest as much as you did in this topic and this visualization?

Stephen: I grew up in Charleston South Carolina and spent much of my youth on the nearby barrier islands. I started surfing when I was a teenager and had many great sessions on Folly Beach. After studying architecture in St. Louis and travelling a fair amount, I moved to NYC to go to graduate school in architecture. I settled there, got married, raised a family, and started my own firm in the city in 1995. I had not really surfed much since my 20's but started again when I was 48 and am now more obsessed than ever, surfing beach breaks in Jersey, Long Island, and Montauk with a trips to Rincon PR as much as possible. My recent interest in the preservation of coastal environments has definitely been inspired by my greater knowledge (in my wise old age) of the conditions that create great surf spots.

A few years ago we designed a modern guest pavilion on Sullivan's Island, a barrier island near Charleston (<http://www.dwell.com/houses-we-love/article/summer-ready-modern-pavilion-south-carolina>). It was highly attuned to the local climate and incorporates a lot of storm resistance requirements including being raised above the 100 year flood plain. The space underneath was finished and used as a shaded entertainment space, an important lesson for our competition entry.

As a result of this project and a lot of time surfing, I became increasingly interested in a more sustainable approach for design on barrier islands that was more comprehensive and took into consideration climate change; that looked at the entire environment including the beach, dunes, vegetation, wetlands, buildings, roads, and infrastructure. I noticed that on Sullivan's Island they had done a pretty good job of requiring homes to be considerably set back from the existing dunes, dune vegetation, and trees, thereby preserving natural storm defenses and ecosystems. Unfortunately this is not the model that has been followed in most of the Northeast. In addition, last year, I co-organized a symposium for the Columbia University Architecture School Alumni Association on climate change and cities post-Sandy. The panel included imminent climate scientists, a landscape architect, engineer, and film maker. It was a real eye opener. The MOMA PS1 competition was announced around that time and it seemed like a good way to explore some ideas.

Jim: This is part of a larger exhibition by MOMA in New York right? What is that exhibition seeking to address and where can people learn more about it.

Stephen: I think it's best to quote from MOMA/PS1's website: "EXPO 1:NY is an exploration of ecological challenges in the context of the economic and sociopolitical instability of the early 21st century." <http://www.momaps1.org/expo1/>.

It's a wide ranging program consisting of art, film, lectures, performances, and community events at many different venues including a geodesic dome donated by Volkswagen for the Rockaways.

Jim: Where does the phrase "Yona on the beach" (the title of your work) come from?

Stephen: "Yona" refers to Yona Friedman, a visionary Bulgarian architect, artist, and theorist who lives in Paris and has proposed many schemes for elevated cities consisting of open structural frames that would accommodate housing designed and built by people themselves. "On the Beach" alludes to trying his idea on a beach for the first time and is also a reference to "Einstein on the Beach", a revolutionary opera by Phillip Glass in the 70's where everything happens very slowly; maybe a good way to proceed with future projects in coastal environments.

Jim: Thanks so much for your investment in this area. This film literally stopped me in my tracks... I loved it...because it's very real to me. We feel this issue across our chapter network all the time. Any last thoughts?

Stephen: Surfrider is an amazing organization and doing such important work. I participated in a few of their post-Sandy cleanup efforts at Belmar, NJ and was proud to help. I am incredibly honored that you've shown interest in our submission and hope that it's helpful, in some small way, in increasing people's awareness of the effect of climate change on these dynamic coastal environments, and how we need to think about our relationship with them in a new way.