



5 Bold Ideas For A Hurricane-Proof New Orleans

Why just rebuild the Crescent City when we can reinvent it? Here, the complete plan for riding out a category-5 storm

By Michael Behar Posted 02.04.2006 at 3:00 am



Amphibious Houses

Create foundations that double as life rafts and lift homes to safety if other flood-control mechanisms fail

The History

Dutch taxpayers have spent more than \$8 billion to hold back the sea, but their defenses are not foolproof. As a backup, engineers are experimenting with homes and businesses designed to survive floods by rising above them. In the town of Maasbommel, the construction firm Dura Vermeer is now completing a prototype neighborhood of 34 "amphibious houses" designed to float atop floodwaters. "The Dutch have been fighting water for ages," says company spokesman Dick van Gooswilligen. "So rather than seeing it as a threat, we decided to try to create an infrastructure and environment around water." The concept could work in New Orleans to protect the most vulnerable neighborhoods-those closest to levees or farthest below sea level-if other mechanisms fail to keep the city dry.

The Specs

In Maasbommel, each \$350,000 home is bolted to a concrete foundation that functions both as basement and life raft. On dry land, the watertight foundation rests on a set of steel pillars. As floodwaters reach the base of the house, it begins to rise off the pillars-up to 18 feet if needed. To prevent it from floating away, two taller mooring posts thread through sleeves attached to the house. This allows for the buoyant structure to gently rise and fall with floodwaters the way a floating dock at a marina seesaws up and down through high and low tides. Flexible utility conduits preserve gas and plumbing hookups and electricity during a storm. "The houses are not necessarily hurricane-proof," van Gooswilligen says. Levees and sea gates [see page 58] would still have to absorb the brunt of the storm surge. "But [the homes] would have worked in New Orleans in the floods after Katrina."

Eventually, whole city blocks could be built on massive barges. During fair weather, the barges would rest in recessed casings on dry land, more or less unnoticeable until floodwaters poured in and sections of the city began to float. Engineers might even eliminate levees in the most flood-prone parts of New Orleans. Inside this newly formed waterfront district would be entire neighborhoods on floating barges.

The Challenge

Converting the roughly 50,000 homes leveled by Katrina to floating structures would cost \$18 billion, or nearly double the price of rebuilding traditional houses. But modeling even a small section of the city-perhaps a shopping district, park or waterfront attraction-after the Dutch system could rally public support for future amphibious neighborhoods.

The Status

At the moment, officials in New Orleans aren't considering amphibious homes as part of the rebuilding effort. That might change if the Dutch experimental homes survive the next flood intact.

Page 6 of 6

« first < previous 1 2 3 4 5 6

single page

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3 COMMENTS

goldy

07/23/09 at 11:07 am

I like the idea of the floating homes. It is cool but very very expensive. Still it guarantees nothing... It will be like living in boat :)

Jen @ <http://www.goldshares.org>

[Link to this comment](#)

ecobase

07/27/09 at 1:38 pm

It will be like living in a boat only when there is a huge storm. Still I would prefer to watch the storm on the news, not to experience it.

Mira - <http://www.whitenteeth.net/>

[Link to this comment](#)

lweldin

05/26/11 at 1:30 pm

These 5 ideas are all fine, but there is no mention of the obvious best option.

Jack up the houses to above flood level and fill in with hydraulic dredged sand and silt from the Mississippi or other close by fill material.

This could be done a section at a time next to the levees and would strengthen the levees until all of the city is above flood level.


It is the only option that makes sense to me.

I built levees for a living for 35 years and I understand the power of rivers. To think of all of those people living below sea level with ever increasing chance of hurricanes is a little too much of a gamble. The other increasing risk is the Mississippi river where the bottom of the river is higher than the surrounding land. That needs to be changed also. We think nothing of giving billions to support the oil industry which makes the most profit.

Some also think that corporate farming needs supports. Why not use these unnecessary funds for something like raising New Orleans. Makes no sense to you? Neither should the above mentioned folly of supporting industries which need no help from taxpayers. N.O. either get up or get out.

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