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Crisfield, Md., beats back a rising Chesapeake Bay

WRITTEN BY

David Montgomery

The first emergency call to the Crisfield Fire Department came before noon Monday, Oct. 29, a year ago:

The mail truck was reported floating past the Church of God. This was several hours before the brunt of Hurricane Sandy was due in Maryland's southernmost town. Crisfielders — who live a few feet above the Chesapeake Bay on three sides — thought they knew storms and high water.

Soon, whitecaps lapped the front windows of Gordon's Confectionery and Goldsborough's Marine on Main Street. The tide surged down Chesapeake Avenue, flooding Riggin's Market and lifting caskets from graves at the veterans' cemetery. Propane tanks, freezers and cars bobbed like steel buoys in the streets. The city dock was pounded to smithereens.

First responders in military trucks and Swift boats had more 911 calls than they could answer. The driver of an engulfed commuter bus was ferried ashore by Billie Chandler, owner of the Pizza Shoppe. She was riding shotgun with her husband, Eddie, in his Dodge Ram truck. Water sloshed around Billie's ankles inside as she used her smartphone to monitor pleas for help on her Facebook page: "5:37 p.m. Do you think you could come rescue me and my mom and my cats?" Billie and Eddie ended up rescuing half a dozen folks. Night fell with another high tide on its way.

In their house, Billie and Eddie huddled under the covers. There was no heat, the yard was submerged, the truck was totaled, and, across town, the Pizza Shoppe had two feet of



Restaurant owner Billie Chandler says, "They need to figure out a way to preserve" Crisfield. (Greg Kahn/GRAIN)

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water.

“Eddie,” said Billie, “if we wake up and there’s no casualties, it’s going to be a lucky time.”

This scale of flooding was supposed to happen once in 100 years — and then the sea started rising faster than ever.



Water spills onto Hoopers Island Road, up the coast from Crisfield, during high tide. The bay is a foot deeper than it was at the start of the 20th century, meaning that storm surges are higher, and land in the region is sinking. (Greg Kahn/GRAIN)

Sandy was a private nightmare for Somerset County on the Eastern Shore. The wreckage to the north — in [New Jersey and New York](#) — made the headlines, while little Crisfield was all but forgotten.

The storm forced a reexamination of Crisfielders’ relationship to the water. In the silent spaces between cleanup conversations dwelt questions about whether this superstorm had anything to do with a [changing climate](#).

“Sandy completely changed the consciousness and thinking of people in the community,” said James Lane, a folklorist and Crisfield historian. “We

have some hard choices to make. If we are going to live with sea-level rise, are there elements of our community worth salvaging and keeping and worth holding on to? Or should we just abandon it and move? Then again, what about the people who decide they will not leave because they have no other place to go?”

Two months after Sandy, Gov. Martin O’Malley directed state



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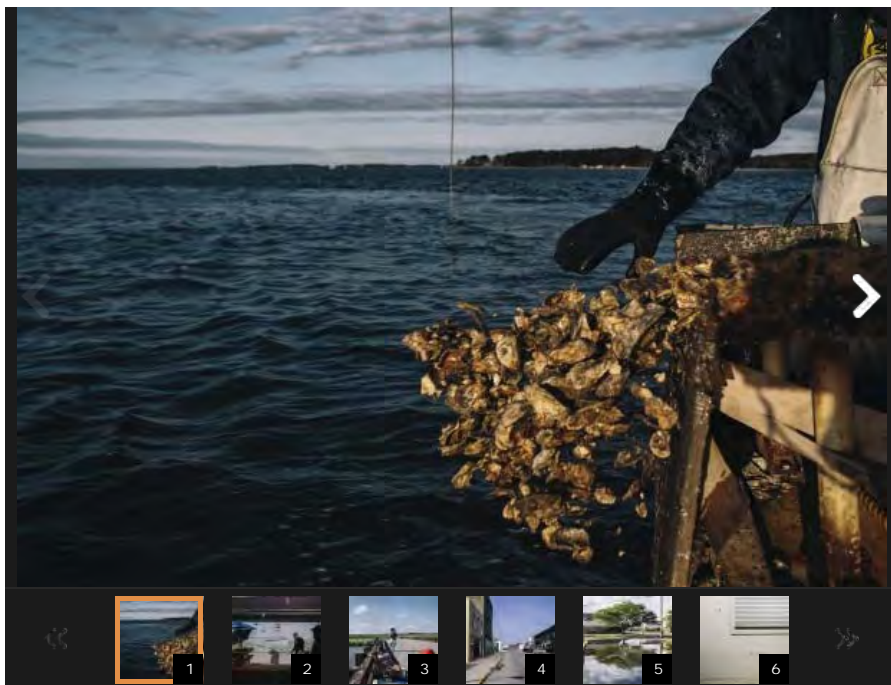
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agencies to plan for coastal flooding and ordered the state's climate change experts to update projections for sea-level rise. Donald Boesch, president of the [University of Maryland Center for Environmental Science](#), headed the group that [delivered the results](#) in [June](#). Its conclusion: The land around the Chesapeake Bay is slowly drowning.



Floyd Chance Jr. discards worthless oysters into the Chesapeake Bay in March on the last day of oyster season. Maryland's once-plentiful resource has been declining, along with populations of crab and fish, but the sea level has been rising. The long-term survival of some Eastern Shore communities is in question as young people move out, abandoning jobs in the seafood industry and homes at risk of flooding.

Greg Kahn /Grain

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“Scientists will be the first to tell you that you can’t ascribe a particular weather event to climate change,” said Boesch, but Sandy’s impact was likely more severe because of climate-caused sea-level rise. The bay is a foot deeper than it was at the beginning of the 20th century, meaning comparable storms surge a foot higher. And the rise is accelerating.

On a clear day months after Sandy, Boesch was sitting in his office on Horn Point overlooking the Choptank River, an hour from Crisfield. He stood to illustrate the report’s projections, drawing his finger in a line across his stomach.

“Our best estimate is that sea level will rise that much this century,” he said — about 3 feet 8 inches by 2100, or nearly half an inch per year. In the worst case, 5 feet 8 inches.

In the shorter term, the projection is for an increase since 2000 of 1 foot 5 inches by 2050. The worst case by mid-century: 2 feet 1 inch — in just 37 years.

This projected pace is faster than the one-foot rise last century, and it’s more rapid than global projections. The global rate has

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accelerated because warming is melting ice caps and changing ocean dynamics. It's more pronounced in this region because the land is sinking, too, still resettling after the last ice age.

"During this century, we expect the relative sea level to rise [about] three times as much as in the 20th century" on Maryland's shores, Boesch said.



Professor Court Stevenson on Poplar Island, where researchers are studying ways to cultivate marshes that can keep up with sea-level rise and protect coastal communities. (Greg Kahn/GRAIN)

A three-foot rise would submerge much of Crisfield. Parts of Annapolis, Baltimore, Alexandria and Georgetown would be much more susceptible to flooding. About 24,000 people, 17,000 homes and 159,000 acres in Maryland are within three feet of the bay's current level, according to [some estimates](#).

A cut in carbon consumption could slow the rise. Meantime, options include erecting seawalls and elevating houses.

Another answer lies on Poplar Island, which had almost vanished until it was rebuilt with sediment dredged from the bay. Now it's an open-air marsh laboratory, where Boesch's colleagues Court Stevenson and Lorie Staver nurture marshes to keep up with sea-level rise.

There's another choice, too. Coastal residents can start new lives elsewhere. After every disaster, some do. But a community isn't portable — it's rooted in places and landscapes. The impact of retreat on towns like Crisfield can be just as irrevocable as the advancing ocean.



Invasive phragmite reeds advance upon a house in Church Creek, about 40 miles from Crisfield. (Greg Kahn/GRAIN)

Many decades ago, Dead Woods Marsh, about 35 miles northwest of Crisfield, was a living forest of loblolly pine. With time, the brackish tides overspilled the Blackwater River. The ground became spongy. Marsh grass infiltrated.

By the 1970s, the woods had become a wetland of dead trees, small ponds and acres of rusty-green bulrush. For a fleeting period, "Dead Woods Marsh" was an accurate place name.



Donald Webster, a former waterman, works at Maryland's Department of Natural Resources. "To me, this landscape is kind of paradise," he says. (Greg Kahn/GRAIN)

Donald Webster, 58, trapped muskrats on the marsh during the winters of 1976-1982. "I never thought about the marsh's name until later in life, when I started witnessing the transformation."

Today, Dead Woods Marsh is half open water, though bleached trunks still stick up like finger bones. Soon it will be Drowned Marsh Bay.

This austere and haunting landscape is on the edge of the Blackwater National Wildlife Refuge in Dorchester County. Since 1938, about 5,000 acres of marsh in the refuge have disappeared into open water and 3,000 acres of forest have become marsh. The net loss of marsh is troubling, because marshes are nurseries for fish and crabs, a habitat for birds and a buffer against sea-level rise.

Dorchester and Somerset are two of Maryland's most vulnerable counties. While Crisfield is preoccupied by the big storm, in Dorchester, spared by Sandy, it's possible to sense the subtler impact of sea-level rise.

Lawns are cut short as putting greens to block an invasive wetlands reed called phragmites (pronounced frag-MIGHT-eez). It is 15 feet tall, silvery green, with tassels the color of eggplant. Phragmites is the vanguard of sea-level rise, an aggressive interloper that loves wetness in transition zones and drives out other vegetation. A stand of phragmites is inundation foretold.

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On the shore of the bayside community of Hoopersville, a cemetery contains graves of the Hooper family from the 1800s. Riprap keeps the graves from washing away. Just up the shore, John Tall Sr., 48, and John Jr., 24, make oyster aquaculture equipment at Quality First Services. When Tall built the shop 25 years ago, he installed riprap to fortify his shoreline, too. But it's no

longer enough.

"Every time we turn around, it's flooded," he said. "It's hard to believe unless you're sitting right here: The sea really is higher."

Tall has bought higher land outside Cambridge to move his shop when he saves enough money. "We want to get the hell

away from here,” he said.

Such stories are familiar to Webster. “I don’t think the culture will go away,” he said. “It will just move people farther away from their livelihoods.”

Lean and weathered, Webster was a waterman until he joined the state Department of Natural Resources, where he is a waterfowl habitat manager who also battles phragmites. He lives between the Choptank and Little Choptank rivers and shares the attitude of so many neighbors — neither a retreator nor a denier.

“To me, this landscape is kind of paradise,” Webster said. “I don’t have to drive 80 miles to see what most folks never see. I like looking across marshes.”

In summers, Lin Spicer’s immaculate home in Church Creek is surrounded by tall corn. Spicer has just come in from planting beans when his friend Webster visits. The Spicers have been dominant in lumber and farming for generations. The timber holdings included a prime stand of old-growth loblolly and oak in lower-lying southern Dorchester.

“When I was a kid, it had probably 1,600 acres of prime timber,” said Spicer, 64. Because of rising tides, “that 1,600 acres has shrunk to 900 acres. Old-growth timber in the ’70s, now it’s duck habitat.”

Yet Spicer is not sure everything the scientists say about the pace of the rising water is correct.

“If that’s true, where we’re sitting will be —”

“Emergent tidal marsh,” said Webster.

“So not farmland,” said Spicer.

“No, muskrats,” said Webster.

“It’ll mean,” said Spicer, that his son “is going to have to go away from here if he wants to continue farming. If that prediction is true.”



A mound of oyster shells in Crisfield. Shell stock is used to build beds in the Chesapeake to be seeded with young oysters in an effort to restore the population. (Greg Kahn/GRAIN)

Crisfield, population 2,726, stands on millions of oyster shells. The once plentiful resource was used in the late 1800s to fill in marshes and anchor the foundations of seafood-packing plants, ice houses, boatyards and banks. By the 1920s, Crisfield boasted record shipments of 29 train cars of fish in one day, 1.5 million soft crabs, 20,000 gallons of crab meat. Its nickname, “seafood capital of the world,” did not seem too much of an exaggeration.

Then the oyster boom went bust,
followed by the crash of crabs and fish.
When Sandy struck, the city was
attempting a desperate transition from
seafood to seafood heritage tourism.

Crisfielders awoke the next day to learn
that nobody drowned, though hundreds
had to flee. About half the houses were
damaged.

Early that morning, Billie Chandler fired
up the pizza oven and began sending food out to first
responders. She lost thousands of dollars’ worth of equipment
in the restaurant, but she’s also a caterer (and she runs the
taxi service and rents kayaks), so she could use her refrigerated
catering truck to improvise a food camp in the driveway.

Crisfield is the kind of place where folks wear more than one
hat — the funeral director is the man you want to see to
program your police scanner — and after Sandy they each
added another. John Phoebus, the defense lawyer, organized
residents to go into neighborhoods and text damage reports.



John Phoebus, a defense attorney in Crisfield, has worked hard since Hurricane Sandy to help facilitate the rebuilding of the city. With the right planning, he says, Crisfield can endure future storms and sea-level rise. (Greg Kahn/GRAIN)

Federal disaster aid began to flow, but what saved Crisfield was a remarkable effort led by residents and powered by church volunteers. Two United Methodist churches and a disused radar station were converted into dormitories for as many as 70 volunteers a week from as far as California and Manitoba. Phoebus chaired a “long-term recovery committee” to direct the effort. In addition to \$9 million in federal reconstruction funds, \$3 million and untold free labor have come from Lutheran Partners in Disaster Response, Mennonite Disaster Service, United Methodist Committee on Relief, Episcopal Relief & Development, American Red Cross and others.

Crisfielders were adamant that none of the money be used to buy out residents so they could retreat from the flood zone.

“The optimist in me sees this as a chance to write on a newly blank slate and make something better for the town,” Phoebus said over crab soup at the Watermen’s Inn. “We ought to build the right sorts of things. We ought to be more resilient to future disasters.”

As many houses as possible would be rebuilt two to three feet above the new flood level. A portion of the aid money would boost development of Crisfield’s surviving strengths.

“There are few places you can go to that you have the ability to be as close to nature as we are here,” Phoebus said. “There are people who value it and want to come here.”

Above all, Crisfielders tried not to be discouraged by the scientists’ predictions. It’s one thing to sit in a lab and draw a waterline on a map, but what if you love that wet ground?

One afternoon in June, ground was broken for the first two homes that would be rebuilt, elevated on concrete block foundations, with high wooden staircases up to the front doors. One was for Charlie Adams, 80, a beloved resident who wore a cap that defined his niche in the community: “67 Years News Boy.” He used to sell papers in front of

Gordon's Confectionery, the downtown coffee crossroads. Now that corner is named for him.

Adams and recovery leaders posed for pictures holding shiny shovels poised to turn the earth.

"One of the amazing things God did at the creation was bring order out of chaos," a preacher told the crowd. "Little by little, step by step, God has helped us to bring order out of the chaos."



A view of Crisfield from one of several condo buildings on the waterfront of the fishing town. (Greg Kahn/GRAIN)

The reconstruction of Crisfield's city dock neared completion in the fall, fortified to withstand higher waters and more turbulent storms. Mayor Percy J. "P.J." Purnell Jr. announced that the U.S. Army Corps of Engineers had agreed to consider spending \$4 million to fortify barrier islands to shelter Crisfield.

That project would address a related problem Crisfielders consider more pressing than sea-level rise. Dramatic erosion of those offshore barriers has opened the city to a 33-mile stretch of bay that gives storm winds a long runway to slam floodwaters into Crisfield. Sandy hit that opening perfectly.

"We're not going to retreat 25 miles because of global warming," said Purnell, 73. "We can see the water is higher than what it was. ... Trust me. The people of this community will figure it out. And if you come back in 2050, we'll still be here."

As the anniversary of Sandy approached, the church-powered rebuilding campaign was about halfway through its list of more than 200 homes to repair. Folks continued to live in

houses with modest flood damage, while a handful were still displaced.

Yet the future was uncertain. The Corps' assessment of the breakwater project acknowledged it would not spare Crisfield from flooding in severe storms. And there weren't enough resources to elevate everybody's house. Crisfielders had to ask themselves: How long was too far in the future to worry about?

Lane, the community historian, planned to move back into the house on Tyler Street that he had fled in chest-high water. Church volunteers helped restore it, but he couldn't afford to rebuild it higher.

"There's no point in running and trying to seek higher ground," said Lane, 61. "I'm the elder of the family, and I'm responsible for maintaining the family's knowledge of their lives here."

At graduation at Crisfield High School in June, Brad Mason, the valedictorian, spoke of how Sandy made the community stronger. He described his affection for Crisfield, and how it fosters achievement. He was an intern at NASA, planning to study aerospace engineering at the University of Maryland.

Then, in July, he was killed in a car accident. NASA put his name on the side of a rocket that blasted off the following month.

The day of the funeral was emotional, with hundreds of mourners filling one of the churches that also housed the recovery volunteers. That morning, Billie Chandler was directing the preparation of 200 pieces of chicken and 20 pizzas to send to the church. The strong feelings of the day, and of this entire dramatic period in Crisfield's history, seemed to catch up with her.

"Today, the whole community's coming together," she said, tears welling. And yet "we could look like [Holland Island](#) one day," she added, referring to a vanished offshore community. - "Crisfield was the seafood capital of the world. What are they going to do 50 years from now? Say, 'Underneath that water used to be the seafood capital of the world'? ... They need to take Crisfield, and they need to figure out a way to preserve it."

Her son and faithful catering assistant, Eddie III, 14, just started the ninth grade.

“Hopefully he’ll visit the world,” she said, “and hopefully he’ll come back.”



Ken Wermuth, right, and Latasha Wallace, who work for the Somerset County Long Term Recovery Committee in Crisfield, inspect a home, one of more than 400 in the area needing damage assessment since Hurricane Sandy. Crisfield was especially hard hit by last year's hurricane, and Wermuth sees the effects firsthand. "Whether the land is sinking or the ocean is rising, something is definitely happening," Wermuth said. (Greg Kahn/GRAIN)

One morning, Ken Wermuth and Latasha Wallace, a pair of recovery managers assessing damaged houses, drove to Kathy Summers's gabled homestead just outside the city limits. Summers had made emergency repairs and was wondering what more she could do. She told Wermuth that one contractor had declined to work on the house.

Wermuth, who had come from the Richmond area with the Mennonites, saw issues that went beyond Sandy.

"This is why the contractor doesn't want to fix your house," he said, pointing at water pooled at the foundation.



"It's like this all the time now," Summers said. "I don't remember when we were young having tides down here like we have. You could look through the woods and see the neighbor's house. Now you can't because the woods are consumed with this phragmites."

Wermuth and Wallace also visited a wiry 72-year-old waterman named William. He didn't invite them in. He thought they represented the government, which he blamed for condemning houses in his neighborhood on the edge of a marsh.

"I'm not here to get your house condemned," said Wermuth in his folksiest Virginia honey.

"That pencil you got there will lead to it," answered William in his neo-Elizabethan Crisfield sea-salt. "They condemned five houses here."

"How much water did you get in the house?" Wermuth asked. An initial report said six inches.

"I don't like to admit to any water," said William. He did allow that the landscape is changing but blamed muskrats for cutting channels that let the tides in. And phragmites was encroaching worse than the government.

"If I don't cut this grass, it will be all over the yard," he said.

"If you set it on fire, it grows faster."

He urged the visitors on their way.

"I'd rather you put me on the bottom of the list," he said. "I'm busy crabbing. I crab to survive. This is the worst year ever catching crabs."

Wermuth and Wallace set off in their truck, past a bare spot where a neighbor's house used to be, leaving the waterman standing with his back to the fertile, rustling marsh.



Casey Milbourne, Miss Crustacean 2013, stands in the cafeteria of Crisfield High School after being crowned the winner of the annual pageant. Crisfield, which has been called the seafood capitol of the world, is forever tied to the water. (Greg Kahn/GRAIN)

There she is, Miss Crustacean! Casey Milbourne, 17, a senior at Crisfield High, floated through the swimsuit and evening attire competitions, aced the interview and won the glittering tiara.

"It's one of the best experiences a girl



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could have,” Casey said after the pageant during the National Hard Crab Derby. On top of high school, she studies at the community college, works at Gordon’s Confectionery and plans a career in neonatal nursing, hopefully at a hospital close enough to live in - Crisfield. “In times of need like Sandy, we all stick together. It’s like a huge

family.”

The 66th annual derby was a four-day Crisfield carnival over Labor Day weekend. Winning recipes in the Crab Cooking Contest included Frankie’s Crab Cluster Bombs, Creamy Crab Tortellini, and My Everything Crab Cakes. The top three finishers in the Crab Picking Contest extracted a combined 7.273 pounds of meat in 15 minutes.

Billie Chandler catered the VIP tent, while Phoebus emceed the live crab races, like his father before him, former state senator Harry T. Phoebus Jr.

The grand finale was the Boat Docking Contest, Crisfield’s answer to NASCAR. Hundreds of spectators packed dockside bleachers. Watermen in souped-up work boats performed 180-degree turns at high speed, backed into a narrow slip and lassoed dock posts, against the clock, for prize money.

A trio of part-time Crisfielders — newcomers who had just bought condos — were among those enjoying the scene.

“This is unbelievable,” said Steve Mazzella, a pharmacist from Rockville. “This looks like the Keys. It’s untouched. I don’t know why everybody is not down here.”

This morning, the three had gone fishing, crabbing and tubing. After the derby, they were heading to the beach. Last night for dinner, they caught 20 crabs off the dock. To them, Crisfield is a bargain, undiscovered paradise. For the price of two boat slips in Annapolis, Mazzella said, he got a condo on the waterfront in Crisfield — and a boat slip. A friend made a similar deal. Their six-story building sits on stilts and overlooks the city dock, where the seafood plants used to be. They laughed at the doom of sea-level rise, so many years away.

The first night of the derby, after Miss Crustacean was crowned, residents made their way to the midway for the carnival rides. It was a warm, calm night. The tide was coming in.

Slowly and silently, water began rising out of storm drains, as sometimes happens at high tide. It seeped across Broadway. Tiny fish darted over the asphalt. A wide puddle blocked the entrance to the fair. Scarcely slowing, the people took a practiced grip on the open gate and easily vaulted across.

The water looked black in the night, possessed of a second, submerged Ferris wheel, spinning upside down.

David Montgomery is a Washington Post staff writer. To comment on this story, e-mail wpmagazine@washpost.com.

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