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City banking on quicker water restoration by first fixing North Fork bypass line

October 6, 2024 | Biltmore Beacon, The (Asheville, NC) Author: John Boyle Asheville Watchdog | Section: News | 1915 Words OpenURL Link

Twice in two decades, enormous transmission lines have washed out at North Fork Reservoir after torrential, hurricane-induced rain events, leaving city residents without water for days on end.

In September 2004, a historic rain event spawned by a hurricane pummeled the Black Mountain and Swannanoa areas, causing a catastrophic failure of the City of Asheville's nearby North Fork Reservoir. Two large transmission pipes washed out, leaving Asheville without water for a week, inconveniencing residents and costing businesses millions of dollars.

Determined to prevent a similar outage at Asheville's main water source, city officials got serious about bolstering North Fork's resiliency. In addition to replacing the two main transmission lines, 24 and 36 inches in diameter, the city added an auxiliary 36-inch transmission pipe in a different location from the main lines.

Contractors buried the line about 25 feet deep.

"It was armored against a high water volume event or some sort of destructive event that happened on the ground surface," Water Resources spokesperson Clay Chandler said in an interview at City Hall on Oct. 3.

"This redundancy was engineered and installed to withstand a 2004 event, without a doubt," added Assistant City Manager Ben Woody.

But the line was no match for Helene's record 31 inches of rain. The bypass line washed out Sept. 27, along with the two main transmission lines.

The city is already rebuilding the bypass line – a key step because it's the city's "easiest path to restore water," Woody said, but full restoration of water for Asheville could take weeks, and he and other city officials have studiously avoided providing a specific restoration timeline.

This is due in part because they were burned after the holiday water outage of 2022-2023 by repeatedly saying water would come back on within a set time frame. That outage dragged on for 11 days in some areas.

First off, Chandler said any timeline would likely be inaccurate.

"Number two, it would be unfair to our customers to predict with any sort of confidence," Chandler said. "We do know that full service restoration will be measured in weeks, not days."

Distribution lines will have to be assessed and repaired where needed, the system's tanks and lines pressurized, and the water tested for safety before the system is fully restored, he said.

At the regular post-Helene news briefing Friday afternoon, Woody showed photos and video of the remains of the bypass line, sitting exposed and broken off in a 25-foot deep ravine Helene carved on the hillside outside of North Fork. Chandler referred to it as "a new river."

It was once a placid mountain stream you'd associate more with trout fishing than Biblical flooding.

The water system was designed to be able to operate solely on the backup line, if it had stayed intact.

"And we will further engineer and armor that for the next one," Woody said.

The reason for choosing to replace the auxiliary line first is pretty simple.

"There's a little more left of it than there was the main transmission line, so based on that and just the geographical location, it's going to be quicker to connect there than it would be at the main transmission line," Chandler said, noting a few hundred feet of the line washed out compared to possibly thousands of feet of the other lines. "So that's 100 percent of our focus right now."

This time, workers will install an elbow in the line to allow it to be buried a few feet deeper, Woody said at the briefing.

The backup line by itself can allow the reservoir to distribute water to Asheville. That would be a key development in restoring service to all customers, as North Fork provides 80 percent of Asheville's water.

While Woody showed pictures of significant progress in the restoration, as well as restoration of a distribution line along old U.S. 70 in Swannanoa, the city is still saying full restoration could take weeks.

The transmission lines exit the treatment facility at North Fork and head downhill, following a small road. Chandler said it's not feasible to locate the large transmission lines elsewhere because they need to follow roadways for accessibility and maintenance.

Most of the Asheville area relies on the city's water system, which serves 63,000 residential, commercial and contract customers, about 155,000 people in all. The towns of Black Mountain and Biltmore Forest get all their water from Asheville, Woodfin 25 percent.

The city created its first water impoundment, the Bee Tree Reservoir, in 1927, and it served as Asheville's primary water source until North Fork Reservoir near Black Mountain opened in 1955. North Fork remains the system's workhorse, but Asheville still draws water from Bee Tree, as well as the Mills River water plant in northern Henderson County, built in 1998, which draws from the French Broad River.

The system cannot operate off of Mills River and Bee Tree by themselves, and Bee Tree sustained serious damage and is out of commission.

Chandler noted that even if the city could continuously run the Mills River and Bee Tree plants wide open, that would not be enough to deliver water to all customers, even at a reduced flow.

North Fork's maximum production capacity is 31 million gallons per day, Bee Tree 5 million gallons a day, and Mills River 7 million gallons per day. Daily demand averages 21.5 million gallons.

At maximum capacity, Mills River can serve about 20 percent of Asheville's system, all in the south. It has been running at reduced capacity, as its entire intake structure was underwater during the storm.

On Friday, Woody offered good news about Mills River, noting it was fully operational again after working at reduced capacity.

"But I want to also give the caveat that the best that Mills River can do is provide water to about 20 percent of our water system," Woody said. "So we've got about 20 percent of the water system in water."

Woody said right now the harder repair is going to be the Bee Tree Reservoir, as that road was devastated and water lines destroyed. After the storm, workers had to walk a mile and a half to get to the reservoir, he said.

On Friday, NCDOT spokesperson David Uchiyama said department workers had completed the repair on Bee Tree Road on Tuesday.

Could the city locate another facility in a safer area?

After two very similar wipeouts at the same facility, Woody and Chandler know some customers may wonder if it's time to look at a more stable setup, possibly at another location.

North Fork has a pristine 22,000-acre watershed, so duplicating that in today's world would likely be impossible, but the city is considering options for an additional facility.

"We know we need another plant in the future, and we want to locate that somewhere else, because that does help," Woody said. "(Before the storm) we were beginning to think about, 'What's the next expansion of the water system look like? And we will do that in a way that increases our resiliency?' So yes, we're gonna have to put it somewhere else."

North Fork and Bee Tree are both east of Asheville, and Mills River lies to the southwest.

Locating any kind of new facility likely would take years, as it would require land acquisition and access to a water source. It would also require approval of City Council.

The French Broad, which starts in Transylvania County and runs north through Henderson, Buncombe, and Madison counties on into Tennessee, could be a potential source, although it has issues with turbidity and E. coli contamination. Chandler said the water department "would explore every water source for a new facility."

Marc Hunt, a river advocate and former Asheville City Council member, said he understands how residents might see two prolonged outages at North Fork in 20 years as a good reason to explore options. But he thinks the city should stick with its workhorse, as North Fork provides some of the cleanest water in the Southeast and a "huge flow that satisfies most of our needs."

"It's just outstanding as a resource," Hunt said. "If the question is can we do something less vulnerable elsewhere, we're going to trade off water quality, and I would argue, water quantity, for resilience. Intuitively, I don't think abandoning North Fork is worth it."

The city has invested enormously in North Fork, including a five-year, \$38.5 million dam improvement project completed in 2021. Siting another location — for a reservoir or even a water treatment plant — would include a host of problems, Hunt said, primarily finding suitable land and relatively pure water.

Former Asheville Mayor Charles Worley, who was in office from 2001 through 2005 and served on council before that, vividly remembers the 2004 outage and the addition of the "armored" bypass line.

"It does boggle my mind," Worley said, referring to the washout of the deeply buried bypass line. "I guess what has struck me is that this storm that we just experienced has to be, if not the worst, one of the worst in history."

As Asheville Watchdog reported this week, Tropical Storm Helene has eclipsed the 1916 flood in rainfall and storm flow.

After the 2004 storm, Worley said discussions took place about possible other locations for a water source or water plant, and he wouldn't be surprised if they resurface again. But he thinks the city is married to North Forth, for better or worse.

"The biggest problem that I was aware of back then, and it's probably the same thing right now, is, 'Where would you find another source that you could develop to be able to supply the needs of Asheville?'" Worley said. "I'm just not aware of anything that would fit that bill."

Asked for comment, current Asheville Mayor Esther Manheimer issued a statement via text, noting "an

uncontrollable act of god" caused the devastation and left the community in crisis.

"Our priority is to restore vital infrastructure like a functioning water system as quickly as possible," Manheimer said. "We are fortunate to have teams of local, state and federal engineers working on our system. That knowledge will provide us the opportunity to learn vital information as to how to protect, or indeed improve, our system going forward."

Chandler said the city is working with several local contractors, as well as water personnel from the city's 160person team, 200 Public Works employees, and water personnel from other cities, including Greensboro, Charlotte, Raleigh, and Cape Fear.

Who pays?

Woody did not have an estimate for the cost of the North Fork and Bee Tree repairs, but he said the city hopes the Federal Emergency Management Agency will pick up most or all of the tab.

"We are doing anything necessary to repair this system," Woody said in the interview at City Hall. "From day one, we just went to contract — we didn't wait. I don't know what it's going to cost. My message to the water department was, 'Anything you want, you do. I don't care.'"

FEMA officials have been in town, Woody said, and the city has access to their expertise, but the city is heading up the North Fork repair, rebuilding the access road and the water lines.

"What they really do for us is they are going to help us monitor, record, track and contract properly, so that we can get reimbursed," Woody said. "So our intention is to get reimbursed for everything we do right down the line."

Asheville Watchdog is a nonprofit news team producing stories that matter to Asheville and Buncombe County. John Boyle has been covering Asheville and surrounding communities since the 20th century. You can reach him at (828) 337-0941, or via email at jboyle@avlwatchdog.org. To show your support for this vital public service go to avlwatchdog.org/support-our-publication/.

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EDITORIAL: Ready and eager to help

October 6, 2024 | Carteret County News-Times, The (Morehead City, NC) Author: Staff Writer | Section: Opinions | 447 Words OpenURL Link

For many of us here along the Crystal Coast and particularly Carteret County, there is a great deal of empathy for the tens of thousands of families whose lives have been forever changed as a result of Hurricane Helene. We remember the outpouring of support, financial and spiritual, that so many provided as our area recovered slowly from Hurricane Florence in 2018 and we are going to be counted on for the long recovery ahead.

The comparisons between the two storms, six years apart, are similar in many ways but in others, vastly different. The one key component in comparison of the two storms is terrain.

In both storms the primary damage was water that originated from the sky. After 36 hours of torrential downpours and hurricane winds, residents in Carteret and surrounding counties were faced with water dripping down the walls of their homes from breached roofs while others shoveled mud from waters rising in the Neuse and Trent rivers as well as Pamlico Sound.

Similarly, Hurricane Helene's initial impact was torrential rainfall, calculated in the trillions of gallons. But it is terrain that creates the differential between the two events.

The coastal region's flat terrain, often times a negative in the case of ocean and sound storm surge, was a benefit. It allowed for quick departure of flood waters once Hurricane Florence departed.

The mountain geography on the other hand, thought to be an asset in reducing the impacts of hurricanes by providing some semblance of resistance to high winds, turned out to be a force multiplier for the effects of Hurricane Helene. The overwhelming volume of rain was concentrated in narrow river valleys and gorges, creating one of the costliest hurricane floods on record. More than just homes were washed away, so were a vast majority of the roads, bridges and essential infrastructure for numerous remote rural communities as well as in the metropolitan city of Asheville, destruction not usually experienced in the flat lands of the coast.

The loss of so much infrastructure along the inland path of Hurricane Helene creates circumstances and challenges that we along the coast can only imagine. The one thing we do understand is the need to keep moving and a commitment to never give up. The infrastructure will be rebuilt, the homes will be replaced. None of this will be easy, cheap or solved quickly.

We in Carteret County have experienced the fears, the frustration and depression that storms such as Helene leave. But we also remember the support we received from so many generous souls who traveled hundreds of miles and gave so willingly to provide for our physical and emotional needs. It is now our time to provide that same support.

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Staff Writer, 'EDITORIAL: Ready and eager to help', *Carteret County News-Times, The*(online), 6 Oct 2024 https://infoweb.newsbank.com/apps/news/document-view?p=AMNEWS&docref=news/19C0BD5540C78DF0



No power but only minor damage: Spruce Pine quartz mine owner updates Helene recovery

October 6, 2024 | Charlotte Observer, The (NC) Author: Brian Gordon; Staff Writer | Section: Business | 522 Words Page: 25A OpenURL Link

The world's main producer of high-purity quartz, a mineral crucial to the global supply of semiconductor chips, announced its shuttered Spruce Pine, North Carolina, mines have endured "minor damage," according to an initial assessment conducted after Tropical Storm Helene upended the town.

"Our dedicated teams are on-site, conducting cleanup and repair activities to restart operations as soon as we can," the mine owner, Sibelco, wrote in an update Friday. The private Belgian company added the power remains out at its Western North Carolina mines but that repairs have "progressed significantly."

With around 500 employees, Sibelco is the largest employer in Mitchell County, a rural mountainous area northeast of Asheville. The company said all its employees and contractors had been accounted for following last week's storm, which dumped more than two feet of rain on Spruce Pine and flooded the local North Toe River. Its facilities have been closed since Sept. 26.

Sibelco's mines sit north of downtown in an area called the Spruce Pine Mining District. Like much of the region, Mitchell County has sustained extensive road and rail line damage, which could hinder employees' ability to get to the mines and Sibelco's ability to move its valuable quartz.

Free of impurities, Spruce Pine quartz has been crucial to the supply of semiconductor wafers, solar panels and other fast-growing technologies.

"It is rare, unheard-of almost, for a single site to control the global supply of a crucial material," wrote Ed Conway in his 2023 book "Material World." "Yet if you want to get high-purity quartz - the kind you need to make those crucibles without which you can't make silicon wafers - it has to come from Spruce Pine."

Sibelco has grown to keep up with the demand. Between 2019 and 2023, the company increased its production of high-quality quartz by almost 60%. And in April 2023, Sibelco committed to invest \$200 million in its Spruce Pine facilities to double production by next year.

On Friday, the company said its final product stock "has not been impacted" by the storm. "We are working closely with our customers to assess their needs and plan the restart of product shipments as soon as we can," Sibelco said.

Sibelco sells its white quartz sand under the brand name IOTA, which the company states online is "indispensable in the manufacture of a wide range of high-tech products."

Disruptions at the Spruce Pine mines have previously impacted the supply chain of quartz; In 2008, a fire at a local quartz refinery "temporarily brought production to a halt and impacted the market," the consulting firm Global Risk Intel reported.

Sibelco isn't the only quartz mining company in Spruce Pine. In recent years, a second company named The Quartz Corp opened area mines. On Tuesday, The Quartz Corp confirmed it had also stopped operations following Helene, noting "we have no visibility on when they will restart."

Compared to Sibelco's sites, The Quartz Corp mine is positioned closer to the North Toe River.

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Stephen Colbert asks viewers - to support NC after Helene

October 6, 2024 | Charlotte Observer, The (NC)

Author: Renee Umsted; Staff Writer | Section: News | 228 Words

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Late-night show host Stephen Colbert asked "The Late Show" viewers Monday night to consider donating to help the communities affected by Helene, specifically calling out the destruction in North Carolina.

Colbert, a South Carolina native, asked his bandleader Louis Cato how friends and family in Cato's home state of North Carolina were doing following the storm during an episode that aired Monday, Sept. 30. Cato grew up in Albemarle and has been a member of the band since 2015 and its leader since 2022, Charlotte Magazine previously reported.

"I'm really grateful. My immediate family is all well and OK," Cato said. "I've got a lot of friends in Asheville who we're still waiting to hear from. They got hit really hard."

During the show, which aired on Sept. 30, an emotional Colbert described the aftermath of the storm, including challenges with power outages, food and water availability and lack of cell service.

He also showed footage of flooding in Asheville. Buncombe County is one of a couple of dozen counties in Western North Carolina affected by Helene.

"The situation in that entire region is dire," Colbert said.

Colbert directed viewers to colbertlateshow.com/hurricanehelene for a list of charities.

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Helene flooding damages Mountain Island Lake homes - Some blame - Duke Energy for it

October 6, 2024 | Charlotte Observer, The (NC) Author: Gavin Off; Staff Writer | Section: News | 876 Words

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Few people in Mecklenburg County suffered more from Hurricane Helene than residents whose homes border the Catwaba River south of Mountain Island Lake.

Floodwater there covered streets. It gushed into homes and filled backyard out buildings with near ceiling-level brown water. A preliminary assessment found four homes to be total losses, said Paige Grande, a spokesperson for Charlotte-Mecklenburg Emergency Management. People living in about 100 houses were displaced.

Lake Drive resident Erik Jendresen, who's sued Duke Energy before over flooding, says the power company shares the blame.

Jendresen lives just downstream of Mountain Island Lake, where water levels were above Duke Energy's target in the days leading up to Helene's arrival, according to the company's website.

Water levels at Lake Norman, just north, were near target levels but above minimums, data show.

Jendresen questioned why the power company didn't release some water - at Mountain Island Lake and others - in anticipation of the influx of water streaming down from the mountains. Lowering the water levels ahead of time and increasing the lake's storage capacity would have prevented the lake from sending so much water over the spillway at once, Jendresen said.

A smaller spill means a smaller impact on communities downstream.

"They could have taken steps well in advance to drastically lower levels at all lakes in the 11-lake system to the bare minimum they're allowed to," said Jendresen, 64. "There's a perception that Duke is like the evil empire. They've earned it."

In an email to The Charlotte Observer on Wednesday evening, Ben Williamson, a Duke Energy spokesperson, said all of the company's lakes were at or below target levels when the hurricane's flood waters reached them.

He said Lake Norman's large size makes it difficult to lower the reservoir quickly, since all of the released water must flow through the much smaller Mountain Island Lake.

"Due to the size of Mountain Island Lake and the historic amount of rainfall from this event, any additional storage that would have been created in the lake would not have prevented the flooding associated with the storm," Williamson wrote to The Observer. "If Duke Energy began aggressively moving water downstream before a reliable or accurate forecast was available, it could have risked the entire region suffering severe water shortages (including drinking water) if the storm missed the region, or dry weather persisted."

Flood of record

Brandon Jones has been the Catawba Riverkeeper since 2018. He's never seen the river flood like it did last week. It's likely no one else has, either.

"This will be the flood of record," Jones said. "We talk about the great flood of 1916. This is bigger. This has more damage. This is more catastrophic."

Helene dumped nearly two feet of rain on some parts of Western North Carolina. Eighteen inches fell onto part of McDowell County, which sits in the Catawba River basin, according to North Carolina State University.

The river, which changes to the Wateree River in South Carolina, starts in the Blue Ridge Mountains and runs 225 miles through 26 counties across the Carolinas.

Jones said one of the river's bottlenecks is the Mountain Island Lake dam. Unlike other dams along the Catawba, the one south of Mountain Island Lake doesn't have flood gates. Water can only move through the dam's spillway or hydroelectric turbines, Jones said.

"The important thing to remember is Duke is not able to quickly move water through the system," he said. "They need a long run-up time because the reservoirs were not designed for flood control. So when the forecast changes quickly or worsens, they are unable to adjust."

Jones said Mountain Island Lake's turbines can move about 10,000 cubic feet of water per second - or about 75,000 gallons per second. He said the influx of water into the lake peaked at about 100,000 cubic feet per second.

"I would expect this to be a 1,000-year flood," he said. "It's terrible. And all of these people just recovered from the last flood in 2019."

Catawba River flooded homes in 2019

In June 2019, after three days of rain, Duke released what was then the largest amount of water ever from Lake Norman. Water poured into more than 100 homes, including many on Lake and Riverside drives near Mountain Island Lake.

The rush of water filled lendresen's home with about five feet of the swollen, muddy river.

He and roughly 40 other families sued Duke Energy. They accused the power company of negligence and negligent infliction of emotional distress and settled the lawsuit last year.

Jendresen rebuilt after the 2019 flood, but he did so on 12-foot pilings. He told the Observer on Tuesday that his home was 8 inches away from flooding again. He said his house was one of only a few on Lake or Riverside drives that wasn't harmed by the recent surge.

Many weren't so lucky.

"Nobody got hurt," he said. "But there's a lot of hurt feelings and a lot of ruined lives."

Grande, with Mecklenburg County Emergency Management, said an official assessment of the damage on Lake and Riverside drives will begin Wednesday. The assessment, she said, would take about a week.

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WAVE OF DESTRUCTION - Once-in-a-lifetime weather event - The science behind why Helene was a catastrophic storm - and why it hit Western North Carolina with such force

October 6, 2024 | Charlotte Observer, The (NC) Author: Adam Wagner; Staff Writer| Section: News| 1157 Words Page: 4A OpenURL Link

How did this happen?

That's one of the key questions on many people's minds as the recovery from Tropical Storm Helene continues in Western North Carolina, with more than 55 people confirmed dead and damage estimated to be in the tens of billions of dollars over a mountainous 25-county region.

The News & Observer asked four experts why this storm's rainfall was so catastrophic. They pointed to a number of contributing factors, including abnormally high water temperatures as the storm chugged through the Gulf of Mexico to a stalled weather system that caused heavy rain in the 36 hours leading up to Helene's arrival in Western North Carolina and likely played a role in the storm remaining so strong as it moved inland.

Here's a look at the role each of those factors played.

Warm ocean and gulf waters

Experts have been eyeing warm waters in the North Atlantic and Gulf of Mexico warily for months.

Warm water means more water vapor, Gary Lackmann, the head of N.C. State University's Marine, Earth and Atmospheric Sciences department, told The News & Observer.

And water vapor is one of the key ingredients in severe weather.

"Water vapor is weather fuel. It's like you have this huge reservoir of anomalously large weather fuel and then you basically just need some mechanism to ignite that fuel," Lackmann said.

As Helene made its way through the Gulf of Mexico Sept. 25 and 26, it passed over abnormally warm water.

Climate change, it's worth noting, has a major impact on ocean temperatures around the world. About 90% of global warming takes place in oceans, according to NASA.

On Sept. 25, the Gulf of Mexico's sea surface temperature averaged 84.2 degrees between 1991 and 2020. This year, Helene encountered waters averaging nearly 86.7 degrees.

"Not only is the sea surface temperature along its path a toasty 30-31 C, the warm water runs deep, producing extremely high ocean heat content ... an endless source of fuel," Ben McNoldy, a University of Miami hurricane expert, wrote in a blog post as Helene started to take shape.

Helene rapidly intensified in the hours before making landfall, starting as a Category 1 storm on Sept. 26 before strengthening into a Category 4 storm with 140 mph winds and making landfall late in the day.

Rain before the storm

As Helene was working its way northward, Western North Carolina was already experiencing heavy rainfall.

A low-pressure system before the storm stalled over the Tennessee Valley, effectively creating an atmospheric wall with severe weather on its eastern side.

Low pressure systems create strong southerly winds on their eastern edges, said Justin Lane, a meteorologist at the National Weather Service's office in Greer, S.C., which covers Western North Carolina. Low pressure systems also lift air into the atmosphere, where water vapor is more likely to condense and become rainfall.

Those strong winds picked up vapor-laden air that was already in the Gulf of Mexico and carried it into Western North Carolina, where strong rains started falling about 36 hours before Helene made landfall near Perry, Florida, around 11:30 p.m. Sept. 26.

"Even without Helene, there would have been a significant rainfall and flooding event just due to the other weather system and setup and this really vapor-rich air," Lackmann said.

At Asheville Regional Airport, for instance, 9.85 inches of rain fell on Sept. 25 and 26.

"We were just streaming that moisture over the area, basically over the same area, continuously for a day and a half or so. You can envision it being a firehose of moisture that doesn't really move," Lane said.

That's the second time in September that meteorologists called a severe rain event a "firehose." The same label was applied to the Sept. 15-16 rainfall that caused significant flooding in Carolina Beach and across Brunswick County.

Geography

The Blue Ridge Mountains played a key role.

As winds out of the east or southeast run into the mountains, air is pushed upward. And as air goes upward, more of the water vapor within it comes out in the form of rainfall or, in winter, snow.

In the case of Helene, that played a significant factor, said Chip Konrad, the director of NOAA's Southeast Regional Climate Center.

"There was more water vapor available to come in and then basically just being wrung out of the atmosphere at a very rapid rate as it's being forced up against the Blue Ridge escarpment," Konrad said in an interview.

Lane, the NWS researcher, agreed, saying the low pressure system and geography worked together to bring more rainfall.

"Because of the extra lift provided by those southeast winds flowing up the mountain, we basically were maximizing the efficiency of the rainfall rates given the available moisture," Lane said. "We got the most out of the moisture that was available."

Speed of the storm

The jet stream also played a role when Helene came into the picture, Lane said, helping the storm move swiftly northward through Florida, Georgia and South Carolina into Western North Carolina.

At one point after making landfall, Lane said, Helene was moving 40 to 45 mph through the Southeast. Normally, storms have time to lose energy over land. This one didn't.

"It was moving so fast, it just didn't have enough time to weaken significantly before moving into our area," Lane said.

And then Helene came

The region's strongest rainfall came as Helene was passing west of the region, Lane said.

The worst place to be when a hurricane is making landfall is the east side.

"By far the worst impacts are going to be in that area from just east of the center out to about 100 to 200 miles," Lane said.

That's exactly where Western North Carolina was.

At the Mountain Research Station in Waynesville, Helene brought 5 inches of rain the morning of Sept. 27.

The rain, which had been falling steadily from the predecessor event, picked up pace at about 2 a.m. Friday, with 0.4 inches of rain over the next hour. Then larger amounts started to fall.

By 6 a.m., there was 0.74 inches of rain falling in an hour. In the 9 a.m. hour, 0.87 inches of rain fell.

Friday brought nearly as much rain as the weather station saw fall in July and August combined. The 1.5 inches of rain that fell between 8 a.m. and 10 a.m. was more than the 1.21 inches the station recorded in August.

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'Civilization is pretty much gone' after Helene tears through Spruce Pine, NC

October 6, 2024 | Charlotte Observer, The (NC) Author: Josh Shaffer; Staff Writer | Section: News | 697 Words

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SPRUCE PINE With the mud ankle-deep inside her music store, and the water stains climbing 8 feet high on the walls, Angie Buchanan said goodbye to 50 years of teaching music in Spruce Pine.

Then she walked through the stinking sludge of Lower Street and tossed her prized cello on a trash pile.

"My life is in there," she said. "It's hard. Very hard."

The Mitchell County town of 2,000 took a beating from the North Toe River, which destroyed its historic brick riverfront and left neighbors still enduring life without power, water or cell service a week after Hurricane Helene roared through.

"Our water treatment plant washed away," said Sonja Emmett, who was out walking her dog. "All the garbage trucks washed away. Everything civilization is pretty much gone."

Tiny Plumtree's near-impassable roads

Nearby, the community store in tiny Plumtree still served as a Grand Central Station for side-by-sides carrying water, food, diapers and toilet paper up narrow, muddy, near-impassable roads where neighbors sat stranded.

And around midday Thursday, they learned one of their own had been found dead after a week. Nobody wanted to talk about it. They hugged and cried as the relief operation became an outdoor wake powered by generators.

Helicopters flew overhead, National Guard trucks rolled past and a community of 818 kept feverishly looking after each other, keeping a list of who is stuck where and who needs what, sending out side-by-sides like free DoorDash service.

"The main thing we don't want is people to think, 'These poor, old, ignorant Appalachian mountain people,' " said Libby Wise, running to check on her 90-year-old mother. "We have plenty of college-educated people here. We are so appreciative of all the outside people are doing for us. Please don't think you're sending food and water to a log cabin."

Those still 'unaccounted for'

Back in Spruce Pine, a makeshift relief station opened up outside L&L Furniture on the Upper Road, which barely escaped disaster, unlike its riverfront neighbor.

Many residents couldn't get out of their houses until Sunday, and an army of 100 volunteers has cut them free oneby-one. One of them on Lower Road Thursday said he'd gotten out 15 families since last weekend.

But fears persist of those still "unaccounted for," the term Spruce Pine uses rather than missing.

Much like Plumtree, neighbors keep a tally of who is where, sending volunteers out to check. But when the find empty houses, mostly intact, the communication blackout forces them to guess at whether their friends have taken up with family elsewhere or disappeared down the North Toe.

"I can sometimes get Facebook with a generator and a Starlink," said Shirley Singleton, whose daughter owns L&L.
"Kind of that's how we're finding people."

Spruce Pine's living room washed away

Down on Lower Street, David Niven was shoveling the mud out of DT's Blue Ridge Java, also sunk under 8 feet of water.

"It's only \$2 million down the drain," he joked. "I've got 40 gallons of gas sitting at my house. I'm blessed."

He and his wife Tricia opened their coffee house 20 years ago, inside a building listed on the National Register.

"I wish you could have seen it," she said. "We were the living room of Spruce Pine. Every church group met here. Everyone and anyone met here. God has kept us for 20 years through fires, through pandemic. On the third day after the flood, God spoke to me and said, 'We're rebuilding.' "

On the day after the storm, before she even saw the ruined guitars, drums and dulcimers, someone broke into Buchanan's music store and stole a harp.

"Kids, probably," she said. "Probably just kids."

Somehow, she thought, in storm or fair weather, she will get Spruce Pine playing music again.

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FEMA aid possible - for Helene-damaged Mountain Island homes

October 6, 2024 | Charlotte Observer, The (NC) Author: Nora O'Neill; Staff Writer | Section: News | 579 Words Page: 2A OpenURL Link

There may be hope for owners of dozens of homes along the Catawba River near Mountain Island Lake as Mecklenburg County officials work toward a federal disaster declaration.

County staff estimate more than \$26 million in Helene-cased damage, a preliminary figure likely to increase, said Commissioner Elaine Powell. People from around 100 residents near Mountain Island Lake were displaced as a result of the storm, The Charlotte Observer previously reported. But Mecklenburg wasn't among 25 counties in the federal disaster declaration from President Joe Biden. The omission means the federal government won't help with home repairs, temporary housing or property damage or other expenses in the same way as communities to the west

Gaston, Lincoln and Catawba counties, which also border the Catawba River, were included in the federal disaster declaration. Iredell, Rowan, Stanly and Union were among other Charlotte-area counties left out.

"I met with a lot of folks who lost everything, all their personal possessions. And they're in shock," Powell said of residents near Mountain Island Lake. "I felt the pain of what these people were going through, the pain, the fear, the shock ... And they wanted help, wanted a magic fairy to appear and make everything better."

Parts of the area were under a mandatory evacuation order last week as Duke Energy pushed Helene's floodwater from Lake Norman through the Catawba River and into Lake Wylie in South Carolina. The rush of water as floodgates opened led to four houses being completely swept away, Powell said. One home was found on Tuesday in Lake Wylie, she said.

"All the water from the mountains makes its way here, or a significant amount," Powell said. "I feel like a lot of people forgot, and it makes sense, there's so much trauma in Western North Carolina ... but this neighborhood was underwater, and four houses went down the Catawba River."

But there's hope.

Powell said the county is working to be added to the declaration, which requires 25 impacted residences and over \$5 million worth of damages, and the request is currently under review. The county staff estimate of 89 impacted structures and and \$26 million in damage tops the requirements. In the meantime, FEMA recommends residents contact local services for aid.

"Residents and businesses should continue to clean up, contact their insurance company and document damage," Brian Haines, a spokesperson for the North Carolina Department of Public Safety, said in an email to The Charlotte Observer. "They should also please report any damage from the storm to their local emergency management agency."

Paige Grande, a spokesperson for Charlotte-Mecklenburg Emergency Management, said residents should take advantage of city and county resources and support from nonprofits while the county works to get a FEMA declaration.

Resources include a donation drive at Calvary Baptist Church, a monetary donation fund set up by group FORCLT, and the Mecklenburg Department of Community Resources. A complete list of resources can be found on the CharMeck Responds Coaltion's website.

Despite the lack of FEMA aid, Powell said it's been beautiful watching North Carolinians work together in the wake of Helene.

"I just love the beauty of that," she said. "It's just like, 'how can we help each other?' And I wish there was way more of that in the world than the opposite... Mr. Rogers would be proud."

Nora O'Neill: noroneill

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Marshall residents dig out of the mud - They know Helene has forever changed their NC town

October 6, 2024 | Charlotte Observer, The (NC) Author: Ryan Oehrli; Staff Writer | Section: News | 484 Words Page: 7A OpenURL Link

Fran Randall peered into a comic book and board game store in downtown Marshall.

"This is the kind of business we never thought we'd have," he said, studying the damage inside.

Randall, 61, is a sixth-generation native of Marshall, a Madison County town with fewer than 1,000 people. He grew up on a hill just over downtown, which had bloomed since 2008 or so into an "artsy" sort of place, he said. There was a bike shop, a bar with live music, art galleries and even a tattoo parlor.

But the old Western North Carolina character was still there, like a place to buy bib overalls.

"It's kind of weird being in that generation that saw old and new," he said Tuesday. "Now, I'm about to see what's next."

Downtown Marshall lies between cliffs and the French Broad River. Like other areas on that river, it was devastated by Helene last week. Police and barricades blocked every way into downtown Tuesday morning. But shop owners, their friends and family met up.

The job was big but straightforward: dig out mud that caked the streets and buildings.

Help for Western North Carolina has come from local law enforcement, the federal government and volunteers. Recovery for some towns will take a long time, though.

Randall donned a fishing hat and a shovel. As he walked along the muddy road, he checked in on friends and neighbors.

Others downtown shared their stories with him and a reporter.

Jaime Perkins talked about putting up barricades around a church before the storm.

Jackson Massey was shoveling mud out of his grandparents' shop on his 15th birthday; he'd get his learner's permit to drive soon, his grandfather said.

Connie Molland shared some good news: Most of the art in Flow Gallery survived.

Randall's town will change more after Helene, he knows. There's some melancholy in knowing that. But then again, that's just the way it is. New people will come in. The collective memory won't hold onto the damage Marshall saw in September 2024.

"The buildings will be gone, a lot of them," he said. "But new things will come in. It'll be a further turn of the page, of the old generation of people that's been here to a new generation."

Ryan Oehrli: @oehrli

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30-truck convoy rides through Helene's worst in Avery County

October 6, 2024 | Charlotte Observer, The (NC) Author: Josh Shaffer; Staff Writer | Section: News | 725 Words

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Banner Elk The long climb to Banner Elk follows switchbacks tangled with power lines, blocked by tree trunks and complicated by a two-lane highway reduced to a pile of boulders, and when you reach the top, you find a town living without running water for the last five days.

The police lieutenant saw his house float away, so he's been sleeping on the couch at Town Hall.

For days, food, water and diapers have arrived by helicopter.

Some parts of town may go without water for months because Hurricane Helene took the pipes.

"How are we holding up?" asked Town Manger Rick Owen. "You can ask me when I'm tearing up or when I'm feeling strong."

And yet on Tuesday, a convoy of volunteers loaded Banner Elk's supplies and headed down the mountain in a 30-truck convoy.

Because down in Avery County, people fared far worse.

People missing in Avery County, NC

Driving in Avery County, known for its ski resorts, gets tricky on a normal day.

But post-Helene, the roads lay scattered with rocks and river mud, cratered with sinkholes and sudden dropoffs - all passing through landscapes marked by pulverized houses and cars floating upside-down.

The convoy made its first stop in the tiny community of Frank, population 158, just down the road from tinier Minneapolis, where fire Capt. Kacey Hughes pointed out two houses that slid down a hillside and smashed into tall oak trunks. They remained there in a thousand dangling pieces.

"We have one person missing from that," he said. "It's just devastating. We have people who can't get their insulin. We have people who can't get their inhalers. Welcome to the Metropolis of Frank."

To these far-flung communities, bigger and more tourist-friendly cities like Asheville take all the attention.

Around Frank and Minneapolis, churches set up folding tables on the side of the road, handing out donated water. Signs get tacked to trees, saying, "Food here."

In Banner Elk, chain saws, generators and the need for toilets

In Banner Elk, Lowe's opened its doors to all takers, handing out chain-saws, generators and batteries.

They fear the attention will fade.

This catastrophe will last months, if not years. Meanwhile, the town needs trash bins for spoiling food.

"Portable toilets would be phenomenal," said Police Chief Kevin Hodges.

"Let's be honest," said Fire Chief Tyler Burr. "We're the stepchild of the nation. If Taylor Swift gets engaged tomorrow, we're an afterthought."

After losing their homes to Helene, they helped others

On its second stop, the convoy pulled into the even tinier community of Spear, where trucks donating food and clothing formed a rural traffic jam.

Erin and Derek Buchanan have five employees at their country store who lost their houses in Helene, and all five were helping gather donations.

"One of them is living in a tent," she said.

Asked if that person was available to talk, she said, "He's on a grading crew right now, working in the roads."

Her sister is the local mail carrier, though Helene's flooding tore through the nearby post office in Plumtree, reducing it to stude and insulation.

She knows everyone on her route, and she made her rounds making a tally of who was still there.

How many?

"Most of them." Buchanan said.

Smashed cars in corn fields, live wires on roads

For their last stop, the convoy pushed on to Spruce Pine, past smashed cars in corn fields, past a Dollar General shoveling out from under two feet of mud.

They passed country lanes few ever travel - Licklog Road and Tatertown Lane - knowing many people now missing will not be turning up with a story to tell.

Then a few miles from Spruce Pine, the convoy stopped dead. Nobody moved for 30 minutes. Finally, a patrol car flew past with blue lights flashing.

Live wire on the road.

Everybody turned around, back into the ruins they passed.

They dropped what canned goods and condensed milk they had with a church and its folding tables, and they drove back to Banner Elk, which now seemed like civilization.

"Nobody's talking politics," said Mike Dunn, a town councilman and one among 100 volunteers working 14 hours a day.

"Nobody's talking religion. Nobody's talking anything else," Burr, the fire chief, chimed in.

"A week ago," he said, "I was worried about my credit score. Now we've got to save the town."

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Biltmore Estate closed until further notice. - A look at the damage there after Helene

October 6, 2024 | Charlotte Observer, The (NC) Author: Chyna Blackmon; Staff Writer | Section: News | 454 Words

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Following the catastrophic flooding of Hurricane Helene, several Western North Carolina homes and businesses were damaged or destroyed, including one of the state's biggest tourism sites: Biltmore Estate.

Like many other sites around the mountains, much of its destruction is still being assessed so the property will remain closed until further notice. According to the Biltmore website, it could be closed to guests until at least October 15.

"Like all of this region, the damage varies by location across our 8,000-acre property. In forested areas, which is a large portion of the estate, wind damage is extensive to grounds and some structures. Crews have been working tirelessly to clear roads so we can begin repairs," the Biltmore's latest update on Oct. 3 said.

How bad was Helene storm damage at Biltmore?

Biltmore House, Conservatory, winery, gardens, and the property's hotels had very little to no impact, the team said, with most damage to other elements of the estate.

"The entrance to Biltmore, located in Biltmore Village, and other low-lying areas of the property, such as our farm, experienced significant flooding and damage to buildings. We are assessing structures and roadways in these areas," the team said.

"We sadly lost a few of our animals during the storm, but the vast majority are safe and accounted for thanks to our dedicated agriculture and equestrian teams. As with all of our neighbors who experienced the effects of Helene, we are working on our plans for a swift recovery and look forward to welcoming our guests to this region as soon as it is safe to do so."

Located in the state's largest mountain town, the 8,000-acre Asheville estate with 250 rooms is the largest privately owned home in the country and one of North Carolina's most popular tourist destinations.

What if you have tickets to visit Biltmore?

As the Biltmore remains closed to guests, including Biltmore Annual Passholders, Vanderbilt Wine Club members, and Sporting Clay Club members, the team is working to accommodate those with previous plans to visit during this time.

According to the Biltmore website, those with daytime tickets are welcome to reschedule a visit for another day once the estate has safely reopened or request refund online. For those who booked overnight stays at the estate between Sept. 27-Oct. 15,reservations have been automatically canceled and a 12-month credit will be distributed.

"We are heartbroken for our friends, family, and neighbors across this region who have been devastated by this storm," Biltmore's website says. "To our first responders, utility workers, and community volunteers, we are eternally grateful for your endless care and courage. We will all work together to recover from this unprecedented disaster."

You can find more information and updates on the status of Biltmore's closure, cancellations and refunds online at biltmore.com/weather-update.

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Thousands still in the dark in Asheville post-Helene. Duke Energy has a temporary fix

October 6, 2024 | Charlotte Observer, The (NC) Author: Mary Ramsey; Staff Writer | Section: News | 568 Words Page: 20A OpenURL Link

Asheville Duke Energy plans to restore power to thousands in a Helene-ravaged Asheville neighborhood within days using a temporary solution to a problem that would otherwise take months to fix.

Like the Biltmore Village community it serves, the Biltmore substation was ravaged by the Swannanoa River's raging flood waters during the storm. Shredded mulch bags, plywood and a garden hose holder that raced downstream during the storm from a nearby Lowe's are still tangled up in the substation's lower level. The mangled station now sits just across a partially washed-out two-lane road from the river.

Fast food restaurants normally bustling with tourists visiting the nearby Biltmore Estate are washed out, too. There are mauled vehicles strewn haphazardly and a shipping container wrapped around a power transmission pole.

The damage has been a "logjam" to restoring power to about 6,700 customers, primarily in Biltmore Village and south Asheville, Duke spokesman Bill Norton said.

The substation's lower level was "completely flooded out," meaning it must be "completely rebuilt," Norton said. There's also likely water damage to the substation's upper tier. Repairs will take three to four months.

"There's no way we could keep customers waiting that long," Norton said.

To provide a faster fix, special crews drove in a 200,000-pound mobile substation across the state from Garner. It's expected to restore power to at least some of the 6,700 as soon as the weekend.

"They're hurting, so we want to get their power on as quickly as possible," Norton said.

It's one of multiple mobile substations going in across Western North Carolina in an effort to help the hundreds of thousands still without power in Helene's path.

Mobile substations provide 'off-ramp' for power

On Thursday afternoon, a Duke crew worked through mud and the odor of dirty river water to dig trenches and lay new copper wiring for the Biltmore mobile substation.

For some customers, "power will be back right away" once it's online, Norton said. Others may have down power lines in their neighborhood that will also have to be addressed before power is restored.

"It's nice to be able to get a chunk like this on all at once," Norton said.

Another mobile substation is already up and running near New Salem Road, also along the Swannanoa River. A third is planned for Hot Springs, about an hour northwest of Asheville, to power its hydroelectric dam.

Substations are a critical connection for getting power to customers - like an off-ramp from the interstate into a town, Norton said.

Latest news on Western North Carolina power outages

Duke has restored power to more than 1 million in North Carolina in the week since Helene hit, but a little more than 200,000 are still in the dark in the state's hard-hit mountain areas, according to Norton. With much of the rest of the state in good shape, Duke is sending everyone available west.

"It allows us to collapse all the resources into the mountain region," he said.

Improving cell phone reception and internet service has made it easier for crews in the area, some of whom traveled from as far away as Canada, to communicate and work more efficiently, Norton said. Duke expects most customers to get their power back by the end of the week.

But for some areas, where roads have been completely washed out, it will take more time.

"If that road is gone, our poles are gone, the easement is gone. That is not a week-long restoration ... It'll be weeks," Norton said.

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Tropical Storm Helene closed the most famous road in Western North Carolina

October 6, 2024 | Charlotte Observer, The (NC) Author: Richard Stradling; Staff Writer | Section: News | 396 Words Page: 24A

OpenURL Link

The Blue Ridge Parkway remains closed throughout North Carolina and Virginia after Tropical Storm Helene tore through the mountains last week, and the National Park Service says it doesn't know when the road will reopen.

In North Carolina, the two-lane highway meanders 252 miles from the Virginia line to the entrance of Great Smoky Mountains National Park. All 252 miles are closed, as crews clear fallen trees and debris and assess damage to the roadway.

The park service has brought in outside help. As of Thursday afternoon, about 250 park service employees from 32 states and the District of Columbia were helping Blue Ridge Parkway staff with recovery, said spokesman Mike Litterst.

Litterst said park service teams were still doing initial inspections of the roadway.

"Based on what the teams have seen so far, significant, and in some cases catastrophic, damage has occurred along the parkway," he wrote in an email.

The worst damage, Litterst said, appears to be in a 189-mile stretch from near Grandfather Mountain to Great Smoky Mountains National Park. The damage includes places where the road was washed away and where buildings, such as the Linville Falls Visitor Center, were destroyed.

Litterst said it will take weeks for the park service to fully assess the damage and begin to estimate how long it will take to make repairs and how much they might cost. That means the road will likely remain closed through fall foliage season, when traffic is often bumper to bumper.

Completed in 1936, the parkway runs 469 miles between Shenandoah National Park in Virginia and Great Smoky Mountains National Park in North Carolina.

The parkway is both a local route for residents and a huge draw for visitors who take in the mountain air and views from numerous overlooks and hiking trails along its route. The park service estimates that nearly 16.8 million people visited the parkway last year, spending nearly \$1.4 billion in nearby communities.

The National Park Service has reopened U.S. 441, also known as Newfound Gap Road, which runs through Great Smoky Mountains National Park between Cherokee, North Carolina, and Gatlinburg, Tennessee. As on the parkway, commercial vehicles are prohibited on U.S. 441 through the park.

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