

Counting the cost of Harvey

Long-term damage from the storm may be underestimated as the scale of disruption to the broader Houston economy – business and domestic – is not yet fully understood

PAUL HODGES INTERNATIONAL ECEM

It was three weeks before the flood water finally disappeared along Buffalo Bayou, where I used to live in Houston, after Hurricane Harvey made landfall. This fact alone highlights its catastrophic impact on Texas and Louisiana.

And, of course, parts of Florida then felt the same terrible impact from Hurricane Irma. It is therefore far too early to properly estimate the costs of the devastation they have caused. But history suggests it is likely to be far larger than most current estimates.

One key issue is that Harvey was unique. Houston is the fourth-largest city in the US, with 2.3m people.

The Houston metro area alone is larger in size than the economies of Sweden or Poland. Never before in the modern era has a hurricane created such damage in one of America's major corporate hubs.



[Click here](#) or visit tinyurl.com/y9gfwcwy to watch an interview with Paul Hodges on the impact of Hurricane Harvey

According to the Nevada Geodetic Laboratory: "The whole area had been pushed down roughly two centimetres by the weight of the water that fell during Hurricane Harvey."

Similarly, Harris County Flood Control District meteorologist Jeff Lindner tweeted: "An estimated 70% of the 1,800-square-mile county (2,700 sq km), which includes Houston, was covered with 1.5 feet (46cm) of water".

At least 300,000 homes have been damaged or destroyed in southeast Texas alone, and up to 500,000 autos have been destroyed. Of course, the task of replacement will create new demand for housing and autos in time.

But as *Slate* magazine warned even before the full magnitude of the catastrophe became apparent: "For the US economy to lose Houston for a couple of weeks is a human disaster – and an economic disaster, too... Given that supply chains rely on a huge number of shipments making their connections with precision, the disruption to the region's shipping, trucking, and rail infrastructure will have far-reaching effects."

LACK OF INSURANCE

One key problem is that most of those affected by Harvey do not have home insurance policies to cover flood damage. Even those with insurance will get hit by the low levels of coverage – just \$250,000 for a house and \$100,000 for contents.

Businesses carrying insurance also face problems, according to the *Wall Street Journal*, as they depend on the same federal insurance scheme, which was, "primarily designed for homeowners and has had few updates since the 1970s. Standard protections for small businesses, including costs of



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business interruption and significant disaster preparation, aren't covered, and maximum payouts for damages haven't risen since 1994."

The maximum coverage for business property is just \$500,000, and the same cap applies to equipment and other contents, far below the needs of many businesses. Even those with insurance will probably find it difficult to claim.

A study by the Federal Reserve Bank of New York after Hurricane Sandy in 2012 showed more than half of affected businesses received no insurance payout.

Auto insurance is a similar story. According to the Insurance Council of Texas, around a third of the cars destroyed in the flood will be uninsured.

Only those with comprehensive auto insurance are likely to be covered for their loss – and even then, people will still suffer deductions for depreciation.

OIL & GAS, CHEMICALS BUSINESSES

The good news is that most of the major refineries and chemical plants affected are al-

ready being brought back on line. Houston is a "can-do" sort of place, where people get on with doing what is necessary.

But it seems unlikely that the whole of the region's vast and integrated complex will be back up and operating as quickly.

A problem at one supplier, or with one key area of logistics, can then create further problems for companies up and down the value chain. In addition, there are practical issues that will need to be resolved:

- Damaged facilities will take time to repair, and may not be top of the priority list. In turn, this will impact suppliers to those plants, and those they supply
- Affected employees will also likely be focused on talking to contractors and insurance companies for months, sharply reducing their productivity

EMPLOYEES FOCUS ON REPAIRS

Already companies are focusing on supporting their employees, given that around 10% have homes substantially affected by flooding. As the *Wall Street Journal* reported, chemicals maker Covestro set up a drive-

through station for employees to pick up bleach, plastic tarps, gas and other emergency supplies. Occidental Petroleum is housing displaced staff in hotels and is giving out interest-free loans and \$5,000 grants to pay for repairs. When Beaumont's water service failed, ExxonMobil used a fleet of 36 helicopters to deliver water to employees and their families.

"It's a small price to pay," said Jerry MacCleary, the North America chief for Germany's Covestro, which was forced to stop production at its Baytown manufacturing site, its biggest in the US, after Harvey knocked out key local suppliers and many of its employees couldn't get to work.

"We can't run this place without people. All the stuff we're doing in the first couple of weeks, those are, in a way, the easier things. It's the longer term that's tougher."

Unfortunately, federal aid is also unlikely to provide a quick pick-me-up. The \$180bn currently being suggested by Texas Governor Greg Abbott is unlikely to be finalised quickly, and it will then take months for the necessary processes to be put in place to disburse

whatever is agreed.

History since Hurricane Katrina hit New Orleans in 2005 also shows that federal recovery spending has failed to cover more than a third of estimated damages. It therefore seems inevitable that the impact on chemical demand

HURRICANE HARVEY – KEY FACTS

- Houston is fourth-largest US city
- Population 2.3m people
- Metropolitan area has larger economy than Sweden or Poland
- 70% of 1,800-square-mile county was covered with 1.5 feet of water
- At least 300,000 homes damaged or destroyed in southeast Texas, up to 500,000 autos destroyed
- Widespread under-insurance - just \$250,000 for houses and \$100,000 for contents
- Houston is home to more Fortune 500 companies than any metropolis apart from New York

» and the US economy will be much longer and larger than what is currently expected.

There is also another dimension to the devastation. Most people think of Houston as being based on oil, gas and chemical production. But Houston is actually home to more Fortune 500 companies than any metropolis apart from New York.

Effectively, therefore, many of these company CEOs and their colleagues are now having to become caretakers for their workers in and out of the office, as well as taking on the roles of civic and community leaders in a time of crisis.

One example is the electronics industry, where even the Johnson Space Center was forced to close for more than a week. Hurri-

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cane Irma meant the Kennedy Space Center lost its potable water supply and was still closed at time of writing.

Japan's 2011 Fukushima tragedy is therefore a powerful antidote to complacency. Unknown to most people, one small factory in the region, owned by Renesas, made 40% of all the micro-controllers used in the world's cars. Similar problems were encountered with a range of other products such as pigments.

The hurricanes are also likely to have a longer-term impact on the chemicals industry. Regulatory concerns may well be increased, given the prominent reporting of the potential for toxic run-off from the two dozen Superfund sites in the area. There will also be increased pressure on the industry to rethink its basic business model and increase the priority given to sustainability.

Even before the hurricanes, consumer concern was mounting over the impact of plastic waste on the oceans and the environment. Now, the devastation they have caused

will likely turbo-charge the move towards renewables and the circular economy. Fear is a strong motivator, and millions will take another look at climate change.

This development will, of course, create opportunities as well as challenges for far-sighted companies.

It is never easy to move away from a "business as usual" mind-set. But the increased need to adopt key elements of the circular economy agenda creates an opportunity to develop major new sources of revenue and profit for the future.

In a decade's time, therefore, we will not simply remember today's devastation. We will likely also recognise that it marked the moment when sustainability stopped being simply an item in the Annual Report, and instead opened the door to a new era for our industry. ■



Click on the map or visit tinyurl.com/y9326jy7 to see the latest post-Harvey outage situation

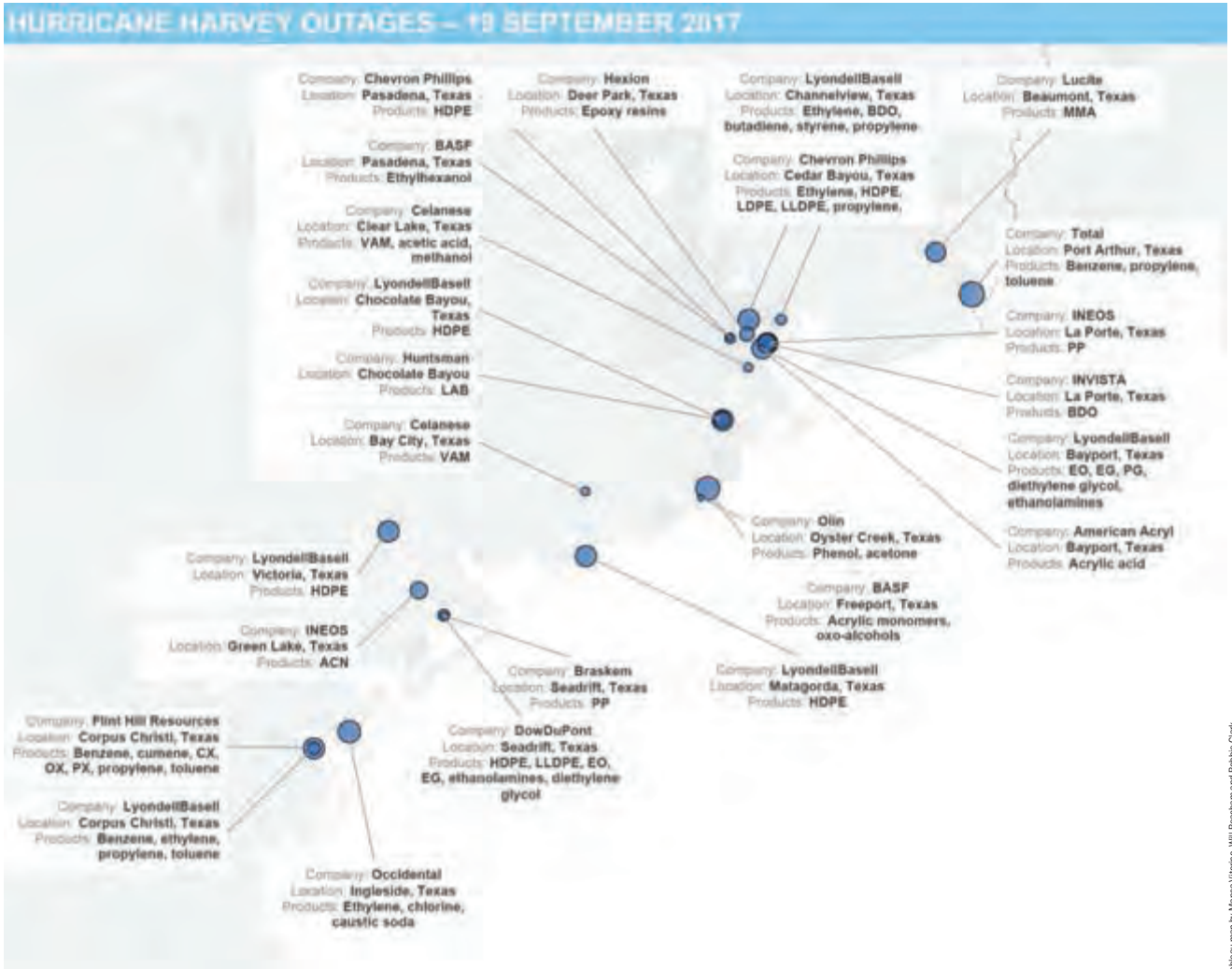


Tableau map by Marco Vitorno, Will Becham and Bobbie Clark