

# BBC News

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## What will a hurricane do to the oil spill?

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By Finlo Rohrer  
 BBC News, Washington

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Some experts believe high winds could cause helpful dispersal

### **The fight continues to stem the Gulf of Mexico oil spill, but could the arrival of the annual hurricane season make things worse?**

The prediction this year for the Atlantic is for an "active to extremely active" hurricane season, which officially began on 1 June.

According to the US's National Oceanic and Atmospheric Administration, there is a 70% chance of eight to 14 hurricanes, of which between three and seven could be major hurricanes with winds of more than 111mph (179km/h).

#### **I'm of the belief that hurricanes are Mother Nature's dispersant**

Prof Ed Overton  
 Environmental scientist

Apart from the possibility of damage and loss of life unrelated to the oil spill, there is a very obvious downside to hurricanes passing near the source of the oil spill.

A hurricane would clearly disrupt the efforts to stop the leak, although BP has a plan to install a device in order to quickly disconnect and reconnect the link down to the spill site in high winds. On shore, tasks like the laying of boom and rescue of wildlife would become more problematic.

But what would happen to the oil that is already out there floating in the sea?

High winds and heavy seas would mix the oil and water and help the process of biodegradation, NOAA believes.

## Bacteria effect

Prof Ed Overton, an environmental studies expert at Louisiana State University (LSU), agrees with this view.



Operations at the site of the leaking well would be disrupted by a hurricane  
"Concentrated oil in a very small area is very bad. But if you spread it out... nature can handle that. Bacteria can degrade the oil. I'm of the belief that hurricanes are Mother Nature's dispersant."

But there is another downside. A hurricane has the potential to take oil to places it would not otherwise reach. It all depends on the path of the storm.

"A hurricane passing to the west of the oil slick could drive oil to the coast," the NOAA says. "A hurricane passing to the east of the slick could drive the oil away from the coast."

This is because hurricanes rotate counter-clockwise.

## Slow-moving water

To date, the weather conditions have been relatively placid out in the Gulf of Mexico.

"So far the water has been very slowly moving, almost stagnant," says Prof Chuanmin Hu, an optical oceanographer from the University of South Florida.

### HURRICANE PROS AND CONS

- PRO: Storm could disperse oil
- PRO: Hurricane east of slick area could in theory send oil further out to sea
- CON: Hurricane could cause loss of life and damage to property
- CON: New oil spills could be caused
- CON: Storm surge could take oil far inland
- CON: Operations at spill site and on shore disrupted

But hurricanes cause storm surges. Such a surge of water has the potential not only to affect the behaviour of oil far out in the Gulf, but also to cause grim consequences when it reaches the shore.

"It is potentially not a pretty picture," says Prof Nan Walker, an oceanographer at the School of the Coast and Environment at LSU.

"A real concern is that because Louisiana is so low-lying, even a category one storm can raise the water level eight or 10 feet.

"There is potential for oil to go fairly far inland, penetrating the marshes even deeper. It makes the problem potentially a lot worse."

The sand berms, or barriers, that have been planned in Louisiana may not stop even a relatively small storm surge.

## High waves

"You have to have a very high berm to stop a 10ft storm surge," says Prof Walker. "Another issue is that the waves are enormous during a hurricane."

She recalls that Hurricane Ivan, a category four storm, created waves of 80ft (23.4m) out at sea.

#### **Hurricanes are the spin ball**

Prof Nan Walker  
Oceanographer

If there is any oil suspended underwater, such high waves would bring it to the surface - but it is likely then to be diluted, she says.

NOAA addresses this point, suggesting that the oil underneath the surface, anywhere away from the leak site, is only being measured in parts per million and will be further dispersed by a hurricane.

One thing NOAA's experts seem clear about is that the oil leak will not have a significant effect on the formation of the hurricanes themselves.

The track of hurricanes is very hard to predict. A pressure system called the Bermuda High can alter their path, notes Prof Walker. If this high pressure area is in the north, the hurricanes can be dragged up the east coast of the US.

If the high pressure area expands to the south or the south-west, storms can be pulled to the west, hitting Mexico and the northern Gulf coast.

As well as their path, their forward motion, intensity and wind speed are all very difficult to predict, NOAA notes.

And previous experience of the interaction of oil spills and hurricanes has usually been based on slicks resulting from damage caused by the winds themselves. No-one can be sure what is going to happen.

"Hurricanes are the spin ball," says Prof Walker.