

# Gulf crisis unique among oil spills

BY KEVIN LOLLAR • KLOLLAR@NEWS-PRESS.COM • MAY 9, 2010

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1:10 A.M. — Environmentally, the Deepwater Horizon oil spill is a whole new petrochemical ballgame.

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While some kinds of damage are expected - oil on beaches and wildlife - scientists don't know what the ultimate effects will be, said ecotoxicologist Ron Kendall, director of The Institute of Environmental and Human Health at Texas Tech University.

"We haven't had a spill like this from the deep-water part of the Gulf," said Kendall, who was a member of assessment teams for the Exxon Valdez and other oil spills. "The oil is heavier, denser. In terms of its degradation properties, it's yet to be seen.

"We're going to have to monitor it and get good science. This is an unfolding experiment. People want answers, but the science is not there yet."

On Friday, John Wilson, head of Lee County's Emergency Operations Center, said he didn't expect the Deepwater Horizon spill to reach Southwest Florida, but wherever it makes landfall, it will be in the environment for years.

Beaches at Prince William Sound in Alaska, where 11 million gallons of crude oil from the Exxon Valdez washed ashore in 1989, still show signs of the accident.

"You can go to some of the beaches and dig, and there's black oil," Kendall said. "But the degradation is different there. It's a northern environment. It's cold. The Gulf is warm water; there's more sunlight. The degradation might take longer in the North."

Even in warmer climates, the effects of oil spills can be seen years after the event, said mangrove expert Terry Tattar, adjunct professor of microbiology at Edison State College in Punta Gorda.

In 1973, the tanker Zoe Colocotronis ran aground on a reef off the southwest coast of Puerto Rico. To get the ship off the reef, the captain dumped 1.5 million gallons of crude oil into the water, most of which washed ashore at Bahia Sucia, or Dirty Bay.

Tattar visited Bahia Sucia in 1995.

"The mangroves were devastated, and when we started to walk on the sediments, every step we took, oil came up in our footprints," Tattar said. "Oil finds its way into the sediments and settles there. It just stays in the muck a long, long time."

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Among the more optimistic views of the Deepwater Horizon spill is the oil will eventually break down through a process called weathering.

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Crude oil is made of different substances from which petroleum products such as gasoline, kerosene and fuel oil are derived.

These substances are mainly compounds of the elements carbon and hydrogen, or hydrocarbons. As weathering breaks down oil from a spill, the hydrocarbons remain in the water.

"If this thing ever gets here, even if it's not gooey glop on the shoreline, it might change the water chemistry," Tattar said. "Hydrocarbons are toxic on all levels. They're much more insidious than a few birds cleaned up by the local vet. Even if you save all the birds, you're still going to have problems. Oil doesn't just go away."

Another environmental issue with the Deepwater Horizon spill is use of dispersants, which cause oil to sink into the water column or onto the bottom so it's no longer on the surface or rolling onto beaches.

Furthermore, Corexit 9500, the dispersant being used on the Deepwater Horizon spill, is itself toxic.

"So, now you're having problems in the water column and on the bottom," said Darren Rumbold, associate professor of marine sciences at FGCU. "There's no easy answer. You're sacrificing the bottom and water column for the surface and beaches."

The Southern Shrimp Alliance, based in Tarpon Springs, has sent a letter to the U.S. Environmental Protection Agency and the National Oceanic and Atmospheric Administration protesting the use of dispersants on the spill.

"We're very worried about the damage," alliance spokeswoman Deborah Long said. "When dispersants sink to the sea floor, there's a question as to what it does to eggs and larvae that live there. As it sinks to the bottom, you're not just dealing with oil, you're dealing with oil and chemicals."