

Deepwater Horizon Oil Spill Update

Presentation to the Chesapeake Bay and Water
Resources Policy Committee

May 21, 2010

Presentation Overview



- What happened?
- How much oil spilled?
- Activities to stop the leak
- Could oil from the spill reach Chesapeake Bay?

What happened?

- The spill started on April 20, 2010 with an oil well “blowout” that caused an explosion on the Deepwater Horizon oil drilling platform.
- It is a deepwater well about 5,000 feet below the surface.



How much oil spilled?

- Numerous estimates have been made, ranging between 5,000 – 100,000 barrels of oil per day.
- The exact spill rate is uncertain and a matter of ongoing debate.
- The spill may surpass the Exxon Valdez oil spill as the worst in U.S. history.
 - Worst case estimates are 12 times the Exxon Valdez.
 - Best case - it's only half as bad.



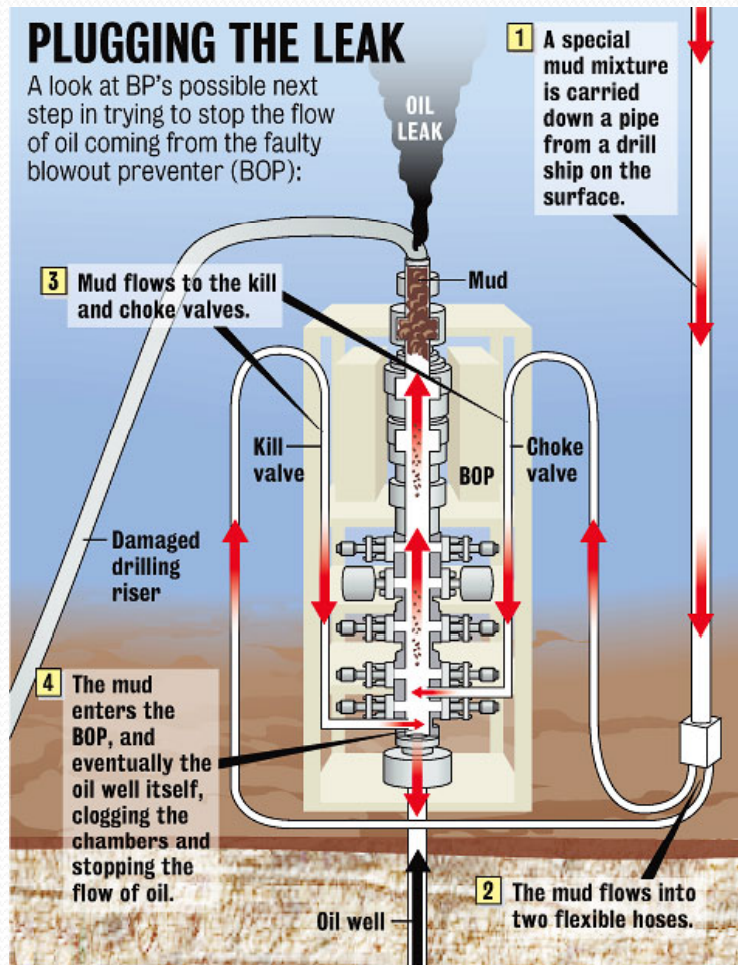
Activities to stop the leak

- A “blowout preventer” designed to cut-off the oil flow in such a disaster did not work.
- Likewise, containment domes have not worked.
- Presently, a 6 inch tube is being used to collect oil and pump about 5,000 barrels a day to a tanker ship.
- Plans exist to permanently cap the well, and also drill a relief well – this may take three months.



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The latest attempt



Source: BP

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- BP is planning to perform a “Top Kill” on the oil well later this week.
- Mud will be pumped at high pressure into the oil well, hopefully stopping the flow of oil.

Tarball movement along the east coast

- The following Powerpoint was created to help people visualize the movement of floating tarballs from the spill area to the southeast and northeast coast.
- This is strictly for education not decision making.
- Larry Atkinson, Professor of Oceanography, Old Dominion University. latkinso@odu.edu
- SST imagery courtesy from the 'Cool Room', Coastal Ocean Observation Laboratory, Institute of Marine Sciences and Coastal Sciences, Rutgers University.

SIZE OF THE OIL SLICK:

The map shows today's forecasted shape of the oil slick from NOAA flyover information and trajectories.

How thick oil would appear on water if looking overhead:

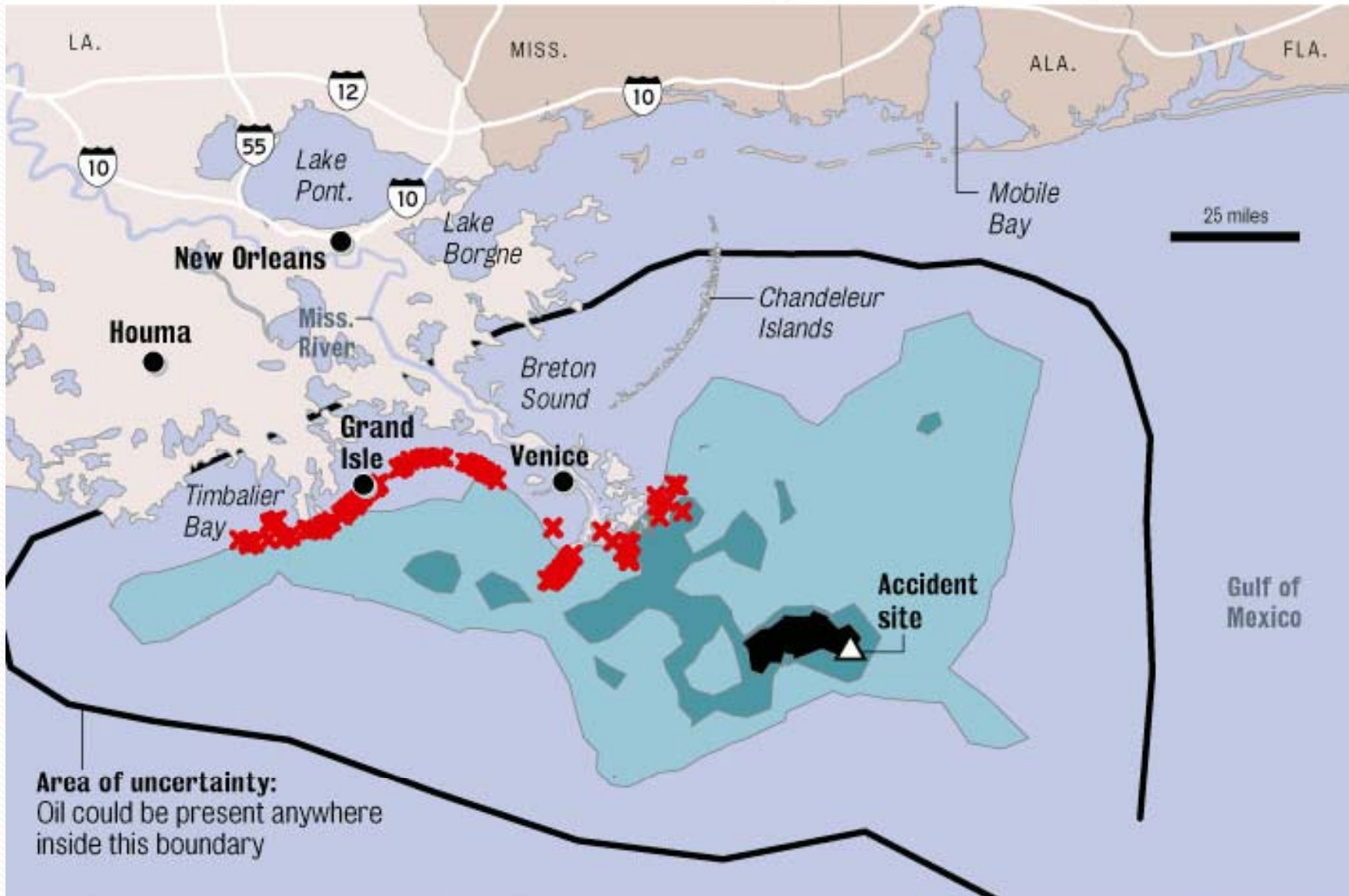


Light

Medium

Heavy

On land



Area of uncertainty:
Oil could be present anywhere inside this boundary

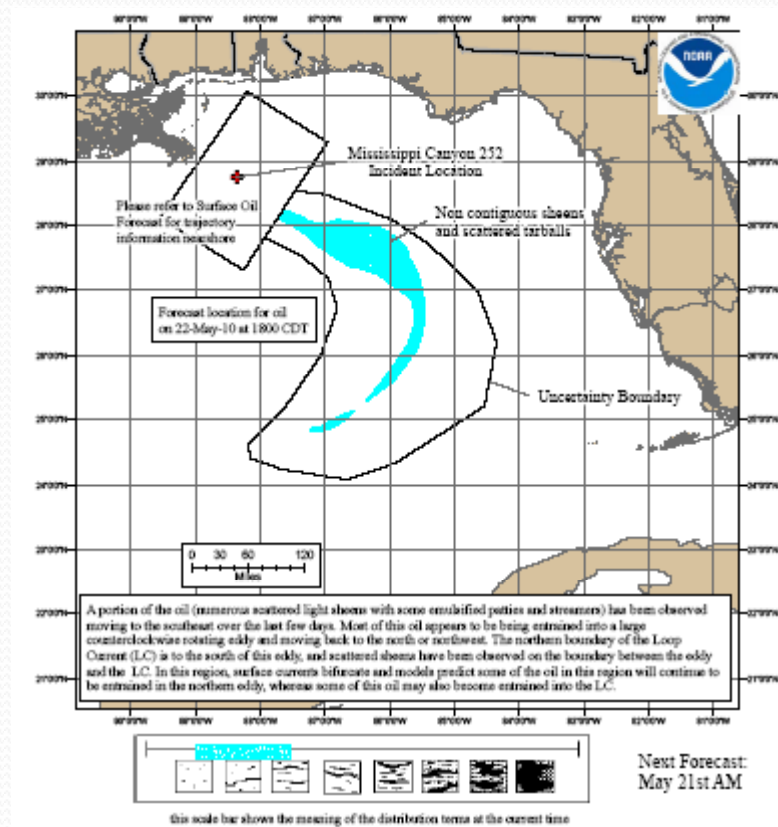
Note: Predicted size may not reflect actual shape and where oil has been spotted.

Source: NOAA

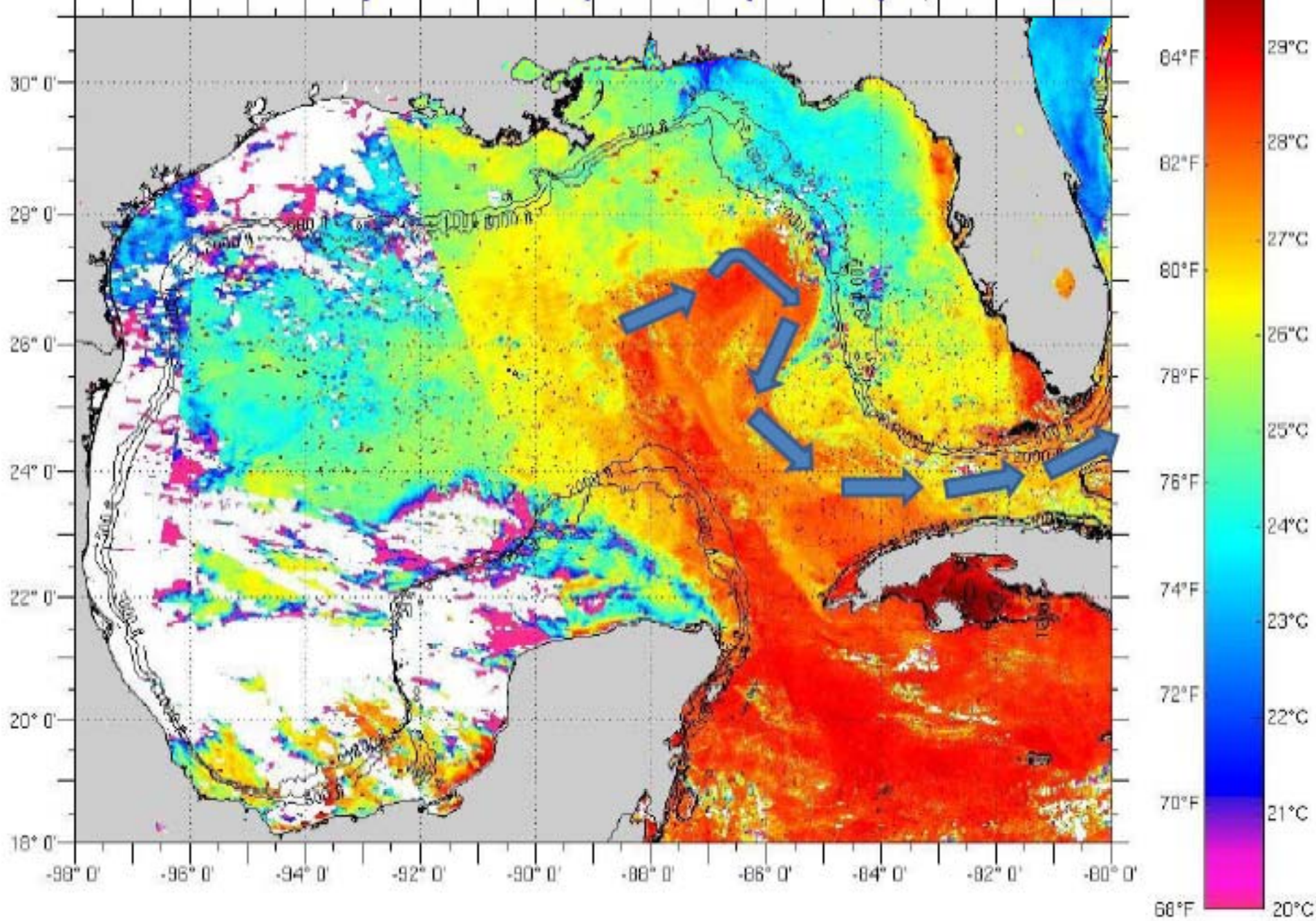
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Could oil get into the Chesapeake Bay?

- According to NOAA models, oil has potentially entered the Loop current.

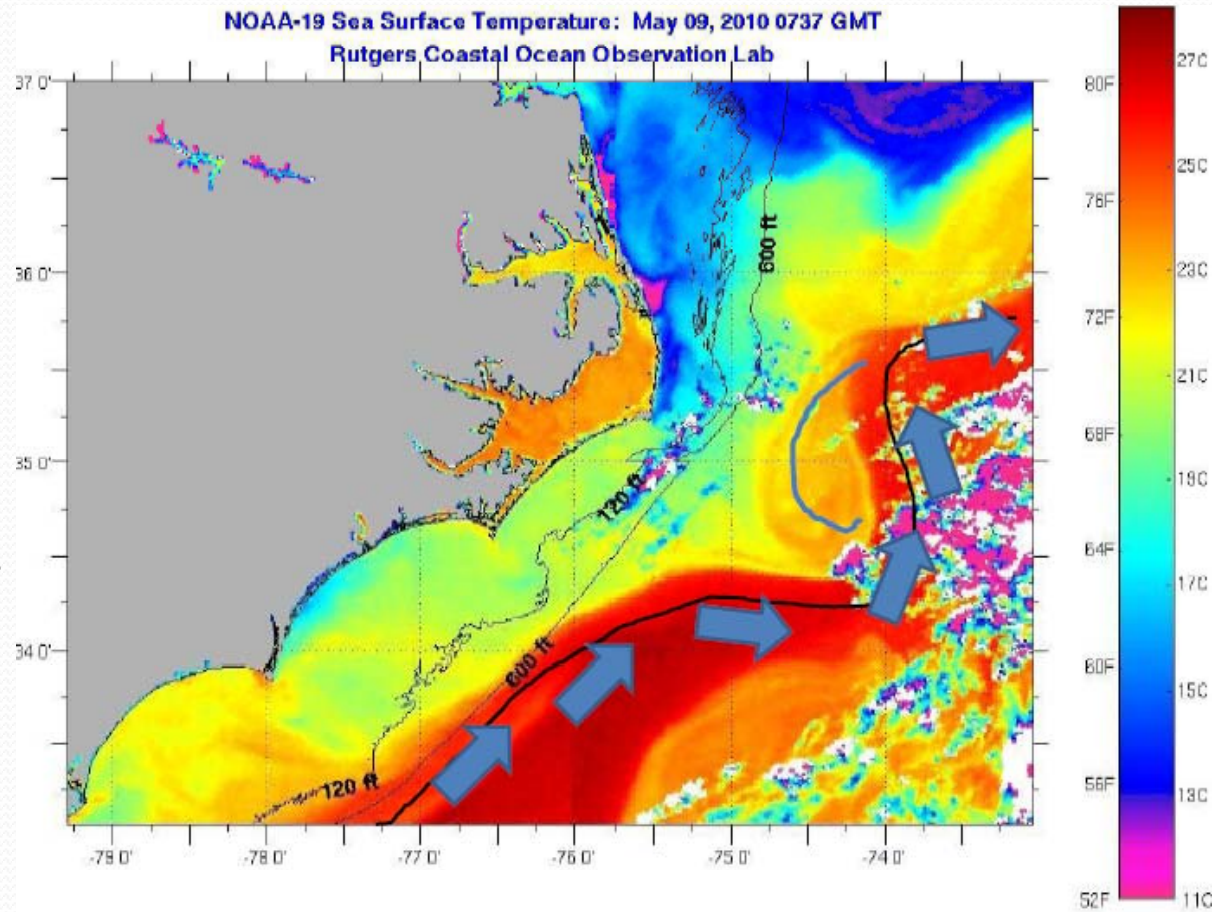


RU COOL Daily Sea Surface Temperature Composite: May 12, 2010



These same models predict it will take about 28 days (plus or minus) to get to the Cape Hatteras area.

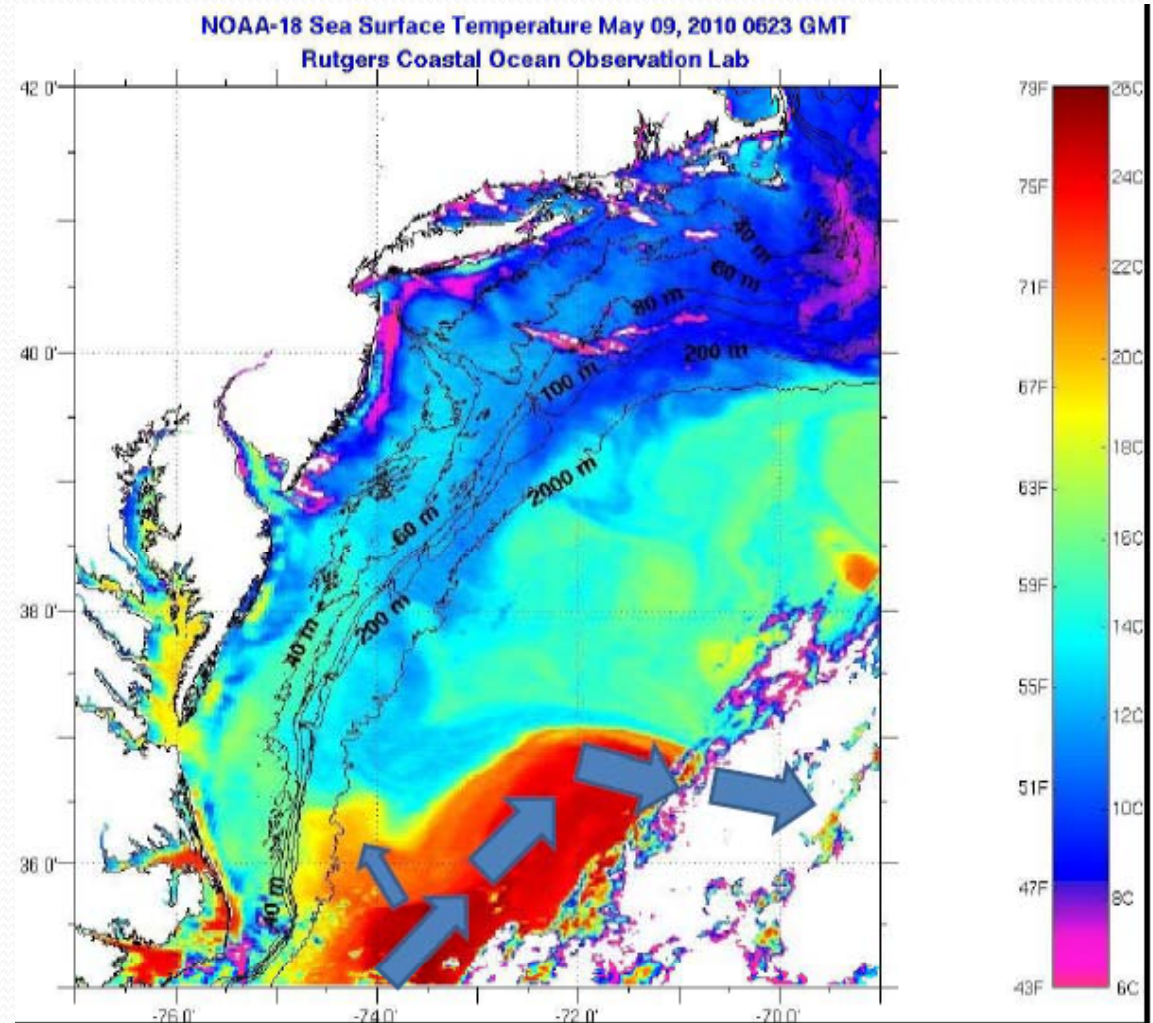
From there it would have to get across the shelf. That requires a combination of eddies and winds from the north: and they are not common in the summer.



Then it has to work its way up the Chesapeake Bay.

All in all, it may get to Hatteras, may get on the shelf, may get to the mouth of the Bay and may work its way up the Bay.

However, a significant environmental impact to the Chesapeake Bay seems unlikely.



For more information on the Deepwater Horizon spill

- Dr. Larry Atkinson
- Old Dominion
University – Center for
Coastal Physical
Oceanography
- <http://www.ccpo.odu.edu/~atkinson/VAMDSpill/>



Questions?



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